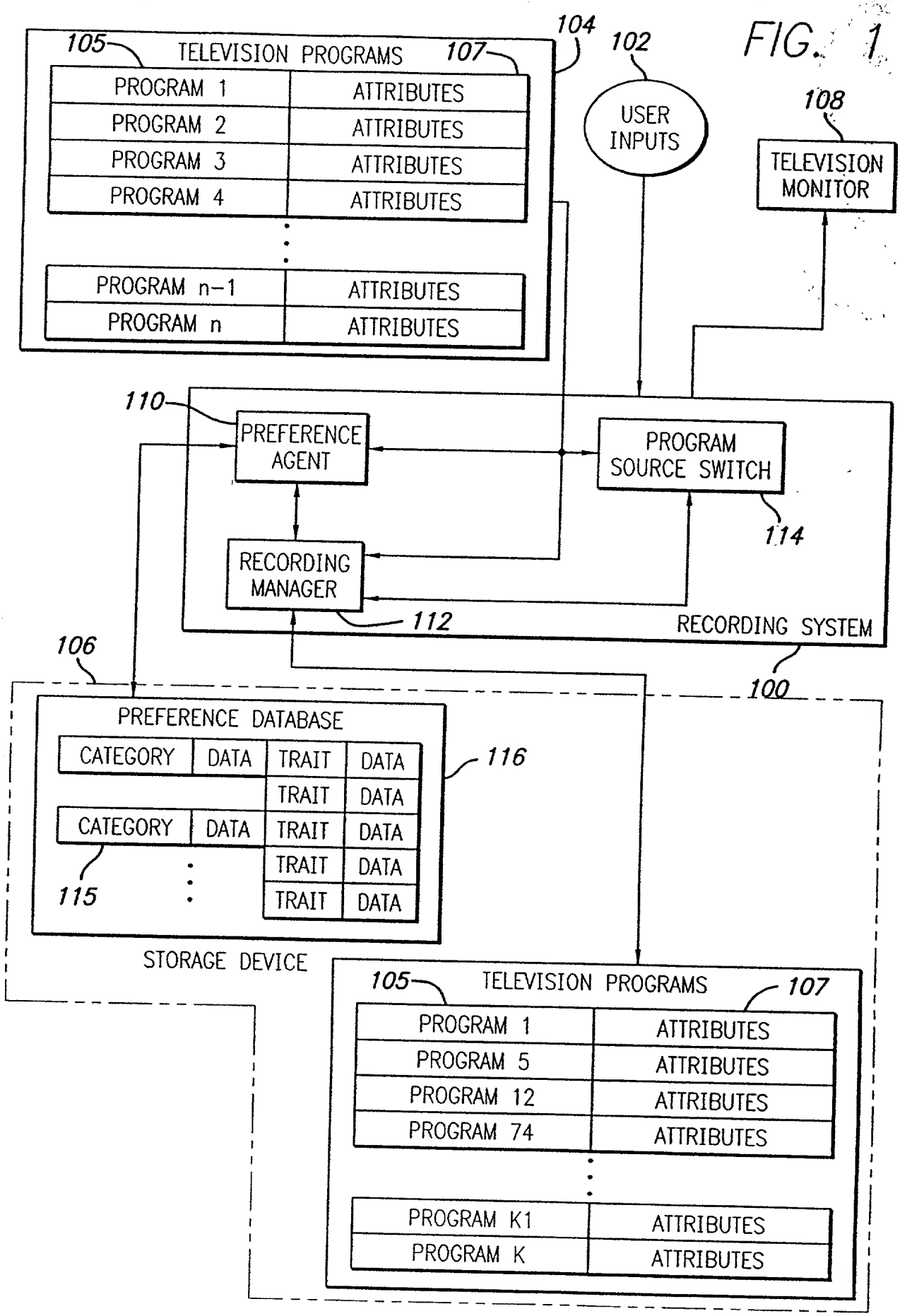
FIG. 1


105
TELEVISION PROGRAMS
107
104
102
USER INPUTS
108
TELEVISION MONITOR
PROGRAM 1
ATTRIBUTES
PROGRAM 2
ATTRIBUTES
PROGRAM 3
ATTRIBUTES
PROGRAM 4
ATTRIBUTES
PROGRAM n−1
ATTRIBUTES
PROGRAM n
ATTRIBUTES
110
PREFERENCE AGENT
PROGRAM SOURCE SWITCH
114
RECORDING MANAGER
112
RECORDING SYSTEM
106
100
PREFERENCE DATABASE
CATEGORY
DATA
TRAIT
DATA
116
115
STORAGE DEVICE
105
TELEVISION PROGRAMS
107
PROGRAM 1
ATTRIBUTES
PROGRAM 5
ATTRIBUTES
PROGRAM 12
ATTRIBUTES
PROGRAM 74
ATTRIBUTES
PROGRAM K1
ATTRIBUTES
PROGRAM K
ATTRIBUTES

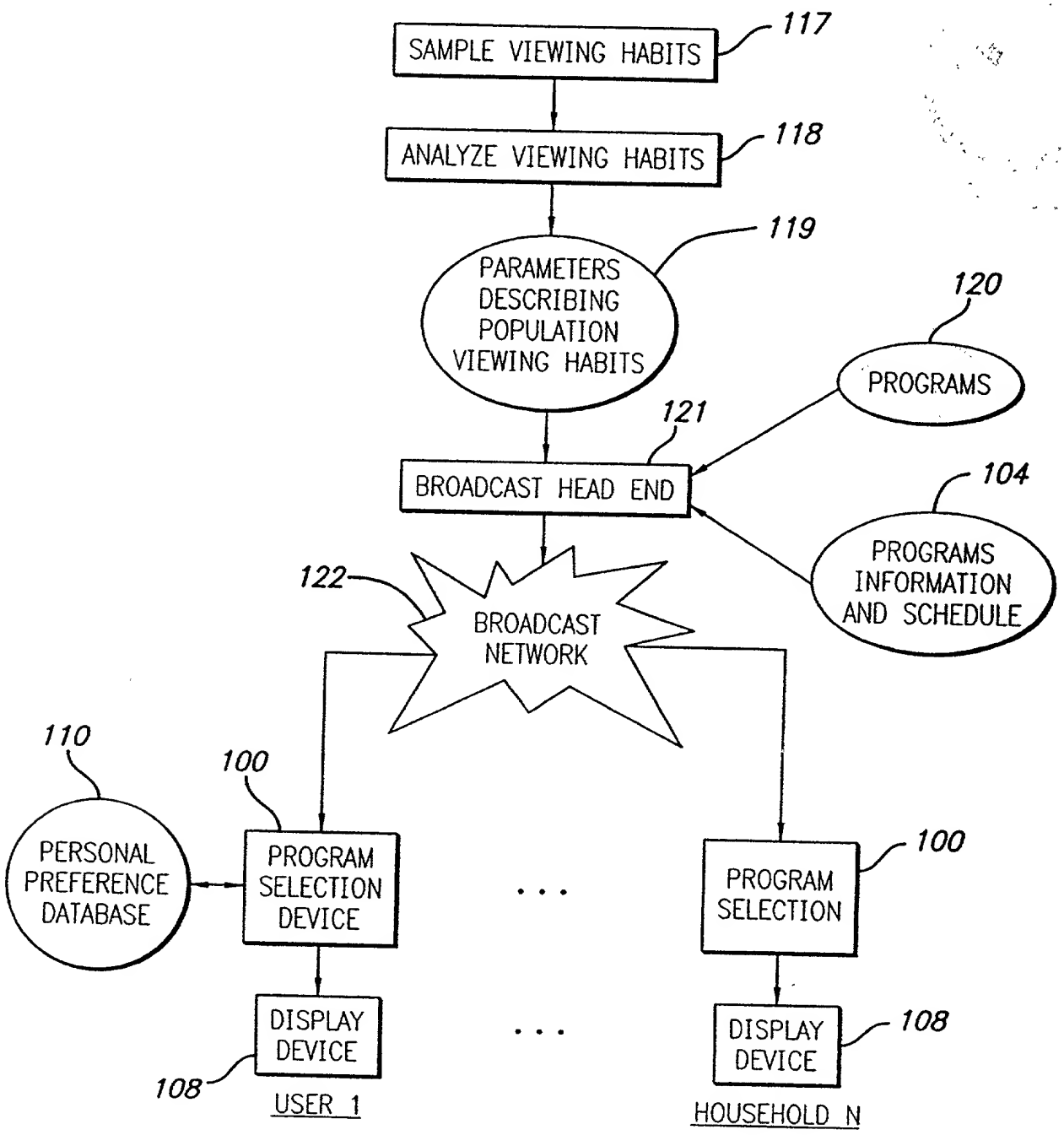


FIG. 2

EXAMPLES OF PROGRAM INFORMATION

EXAMPLE 1	EXAMPLE 2
TITLE=SEINFELD PROGRAM TYPE=SITCOM CATEGORY=COMEDY ACTORS=(ACTOR1, ACTOR2)	TITLE=US DEBT REPORT PROGRAM TYPE=NEWS ARTICLE CATEGORY=US GOVT. FINANCIAL PEOPLE MENTIONED=(BILL CLINTON, ALAN GREENSPAN)
124	125

FIG. 3

EXAMPLES FOR TRAITS	EXAMPLES FOR LIKING FOR VIEWER N
MOVIE ADVENTURE SPORTS MAD ABOUT YOU DYNAMIC TRAIT 1 DYNAMIC TRAIT 2 NBC NEWS FRIDAY MOVIE PREMIER MAD ABOUT YOU	MOVIE=14 ADVENTURE=3 SPORTS=0.3 MAD ABOUT YOU=5 DYNAMIC TRAIT 1=3 DYNAMIC TRAIT 2=5 NBC NEWS=13 FRIDAY MOVIE=18 PREMIER MAD ABOUT YOU-15
126	127

FIG. 4

SOME SAMPLE VALUES FOR FIELDS IN TRAIT RECORD

TRAIT TYPE	TRAIT DESCRIPTION
STATIC	(NBC, "NEWS").
DYNAMIC	SUBSTRING("CIA")IN DESC.
ASSOCIATION	TITLE
GENERATED	

DISTRIBUTION	DISTRIBUTION PARAMETERS
NORMAL	MEAN=13, DEVIATION=2
EXPONENTIAL	
DEFINED TYPE 1	
DEFINED TYPE 2	

FIG. 11

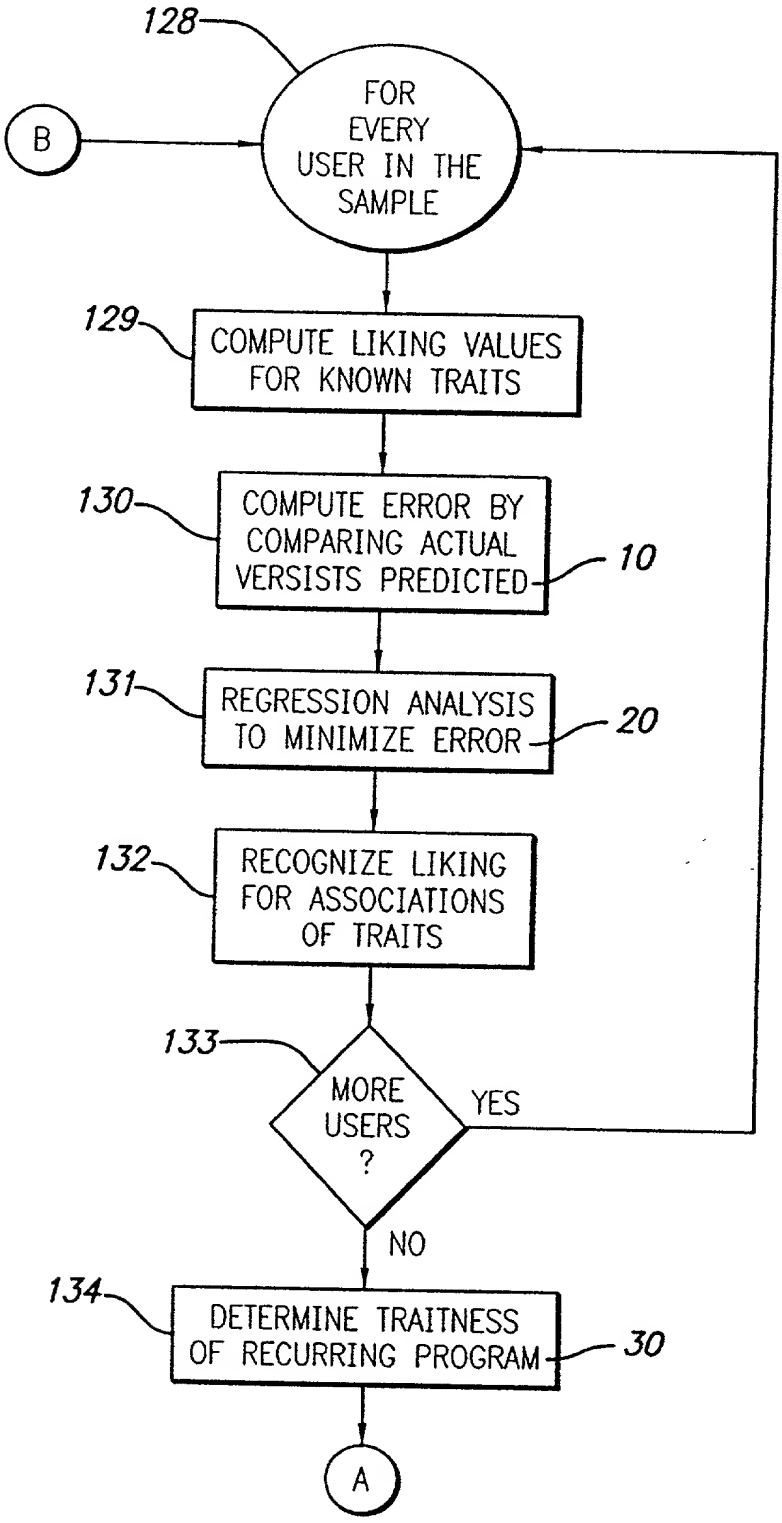

128
FOR EVERY USER IN THE SAMPLE
B
129
COMPUTE LIKING VALUES FOR KNOWN TRAITS
130
COMPUTE ERROR BY COMPARING ACTUAL VERSISTS PREDICTED
10
131
REGRESSION ANALYSIS TO MINIMIZE ERROR
20
132
RECOGNIZE LIKING FOR ASSOCIATIONS OF TRAITS
133
MORE USERS ?
YES
NO
134
DETERMINE TRAITNESS OF RECURRING PROGRAM
30
A

FIG. 5A

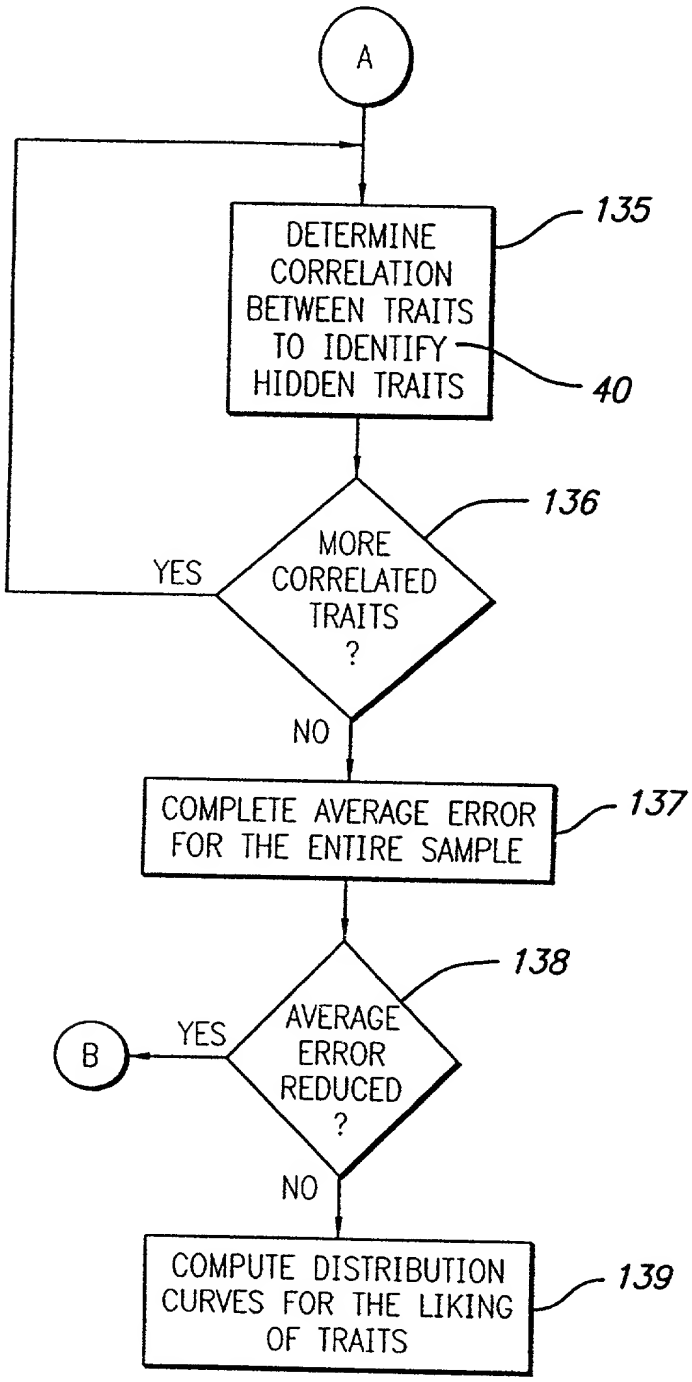


FIG. 5B

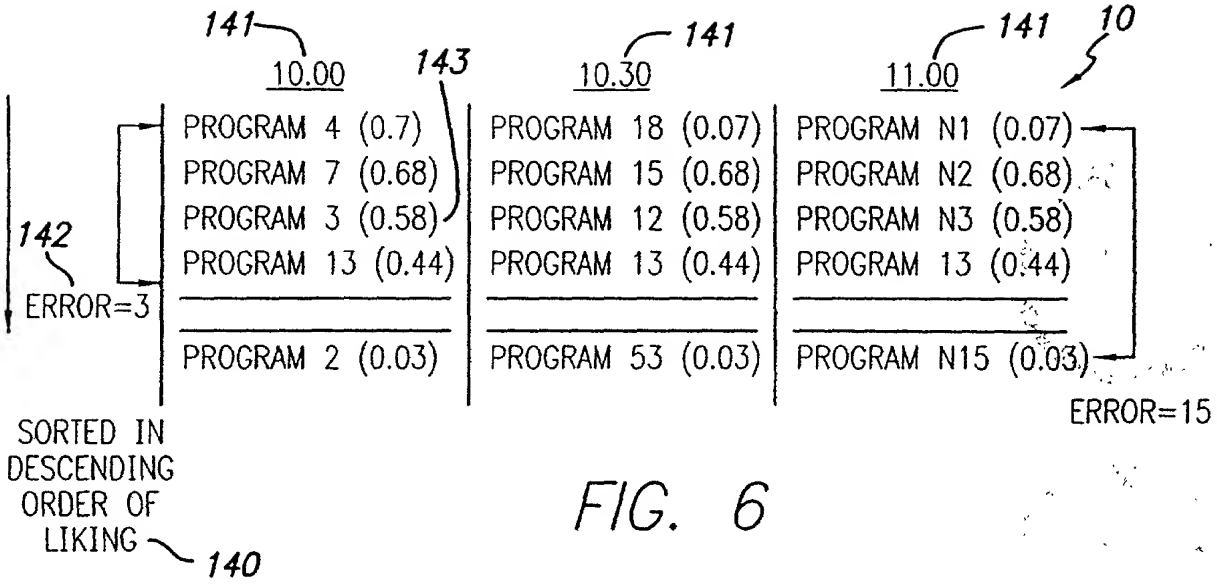

141
10.00
143
141
10.30
141
11.00
10
PROGRAM 4 (0.7)
PROGRAM 7 (0.68)
PROGRAM 3 (0.58)
PROGRAM 13 (0.44)
PROGRAM 2 (0.03)
PROGRAM 18 (0.07)
PROGRAM 15 (0.68)
PROGRAM 12 (0.58)
PROGRAM 13 (0.44)
PROGRAM 53 (0.03)
PROGRAM N1 (0.07)
PROGRAM N2 (0.68)
PROGRAM N3 (0.58)
PROGRAM 13 (0.44)
PROGRAM N15 (0.03)
142
ERROR=3
ERROR=15
SORTED IN DESCENDING ORDER OF LIKING
140

FIG. 6

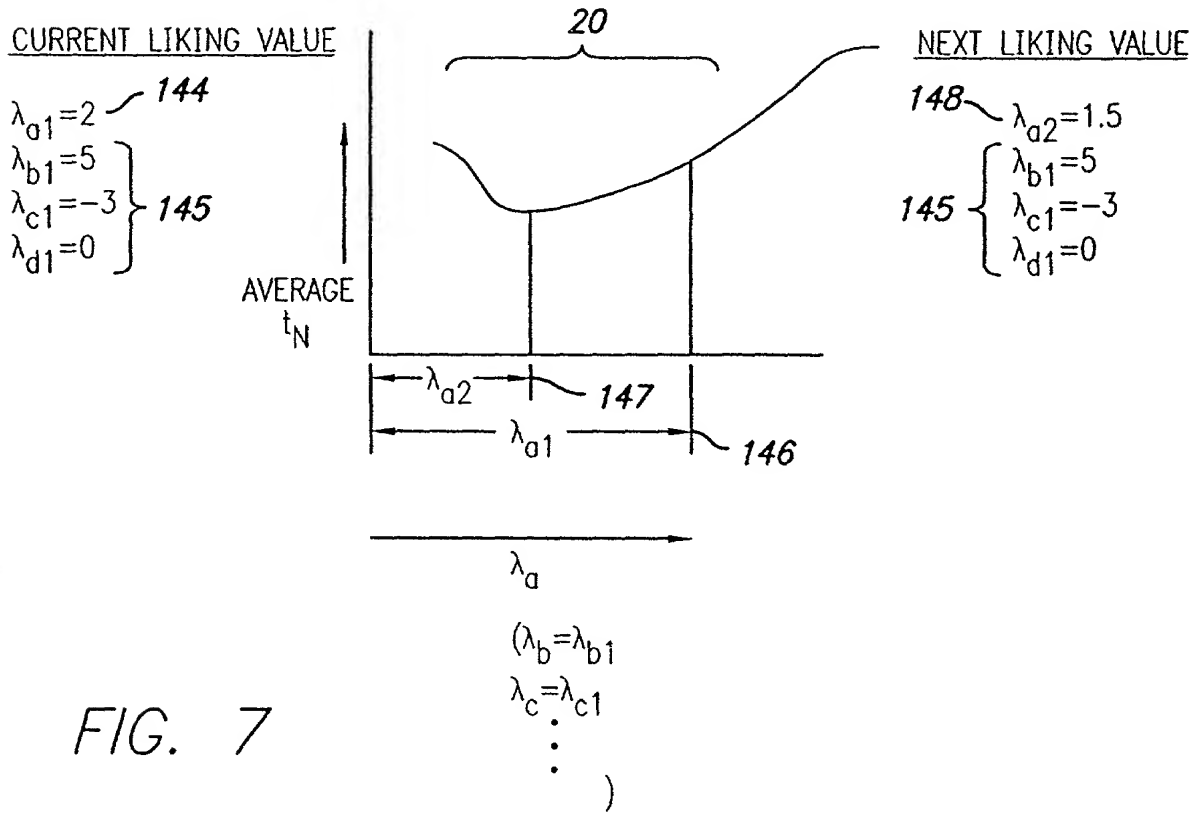
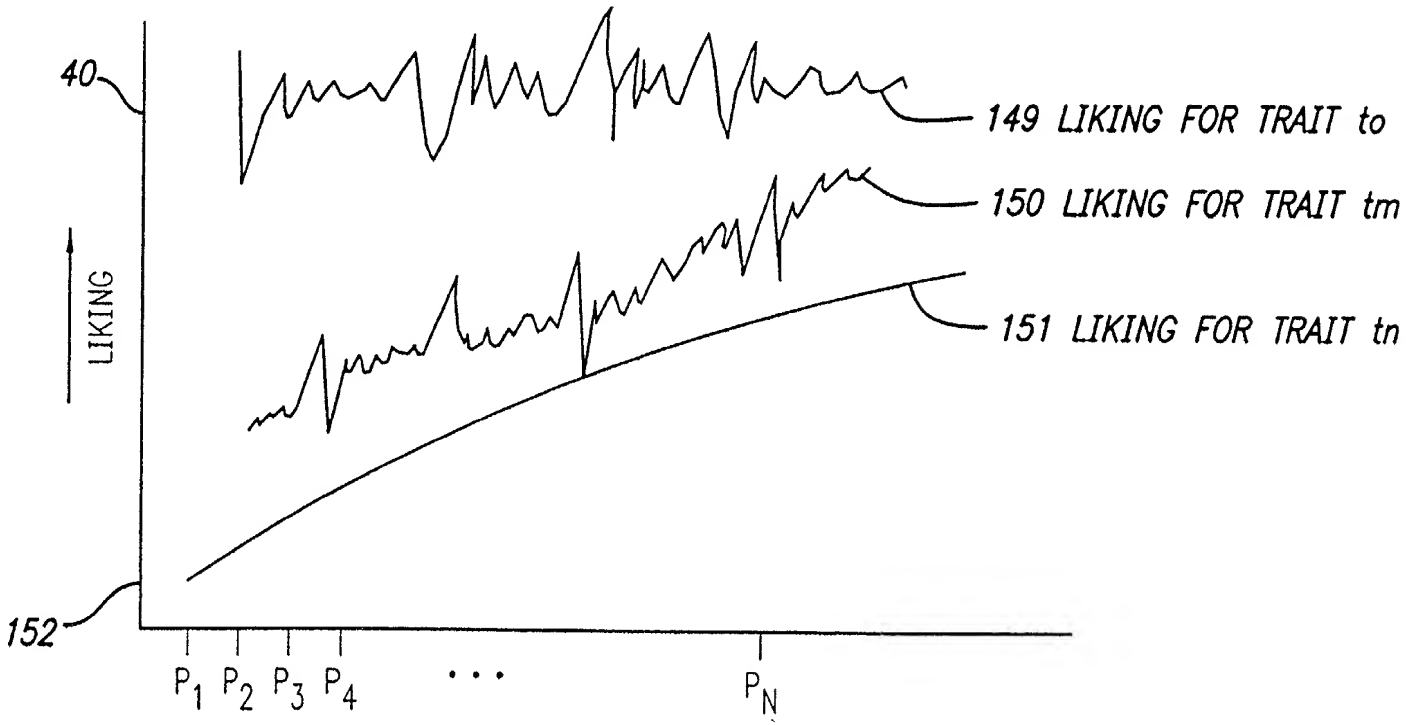

CURRENT LIKING VALUE
144
$\lambda_{a1}=2$
$\lambda_{b1}=5$
$\lambda_{c1}=-3$
$\lambda_{d1}=0$
145
20
AVERAGE t_N
λ_{a2}
147
λ_{a1}
146
λ_a
NEXT LIKING VALUE
148
$\lambda_{a2}=1.5$
145
$\lambda_{b1}=5$
$\lambda_{c1}=-3$
$\lambda_{d1}=0$
$(\lambda_b=\lambda_{b1}$
$\lambda_c=\lambda_{c1}$
:
:
:
)

FIG. 7

RECOGNIZE HIDDEN TRAITS IN PROGRAMS



t_m& t_n ARE CORRELATED

→ t_m CAN BE EXPRESSED AS $t_m=t_x+t_m'$

t_n CAN BE EXPRESSED AS $t_n=Ct_x+t_n'$

FIG. 8

FIG. 9A

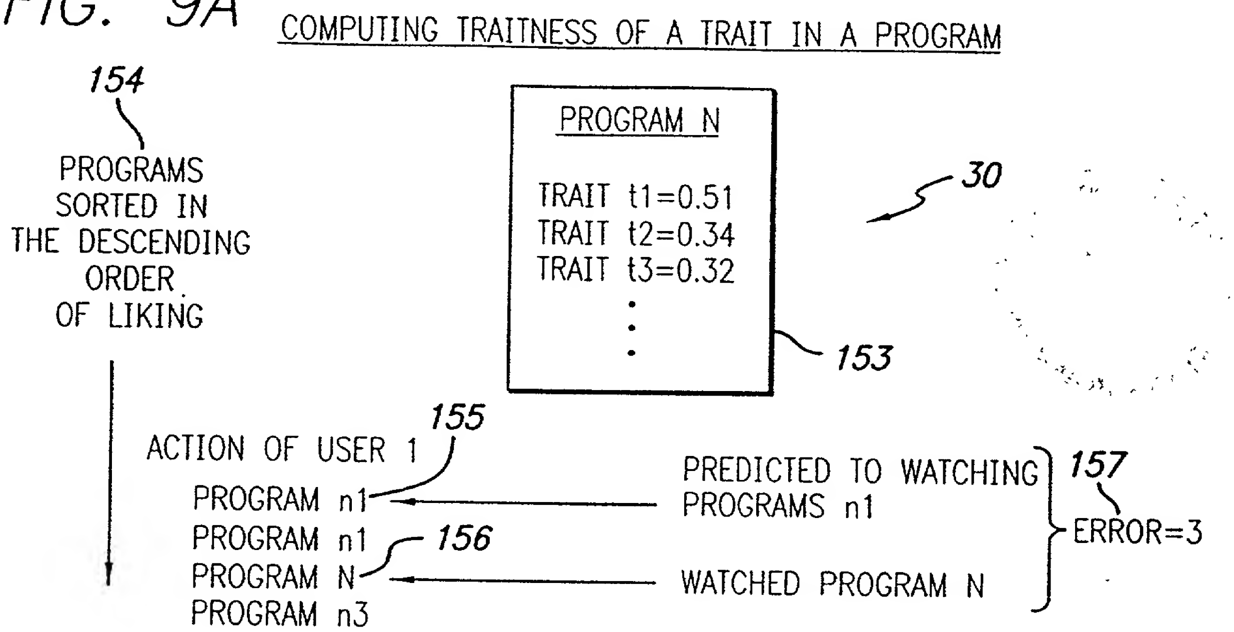
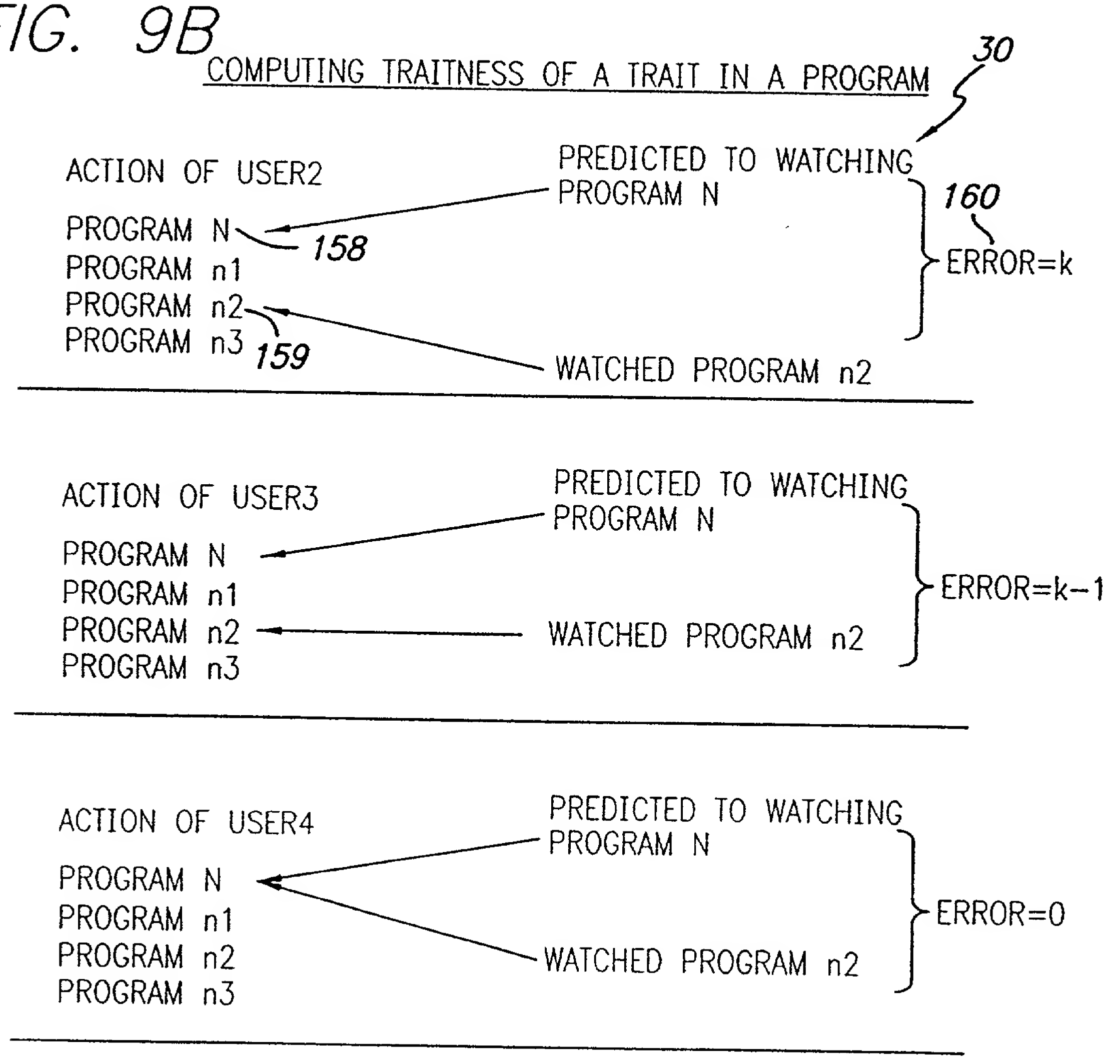

COMPUTING TRAITNESS OF A TRAIT IN A PROGRAM
154
PROGRAMS SORTED IN THE DESCENDING ORDER OF LIKING
PROGRAM N
TRAIT t1=0.51
TRAIT t2=0.34
TRAIT t3=0.32
30
153
155
ACTION OF USER 1
PROGRAM n1
PROGRAM n1
PROGRAM N
PROGRAM n3
156
PREDICTED TO WATCHING PROGRAMS n1
WATCHED PROGRAM N
157
ERROR=3

FIG. 9B


COMPUTING TRAITNESS OF A TRAIT IN A PROGRAM
30
ACTION OF USER2
PROGRAM N
PROGRAM n1
PROGRAM n2
PROGRAM n3
158
159
PREDICTED TO WATCHING PROGRAM N
WATCHED PROGRAM n2
160
ERROR=k
ACTION OF USER3
PROGRAM N
PROGRAM n1
PROGRAM n2
PROGRAM n3
PREDICTED TO WATCHING PROGRAM N
WATCHED PROGRAM n2
ERROR=k−1
ACTION OF USER4
PROGRAM N
PROGRAM n1
PROGRAM n2
PROGRAM n3
PREDICTED TO WATCHING PROGRAM N
WATCHED PROGRAM n2
ERROR=0

COMPUTING TRAITNESS OF A TRAIT IN A PROGRAM

FIG. 9C

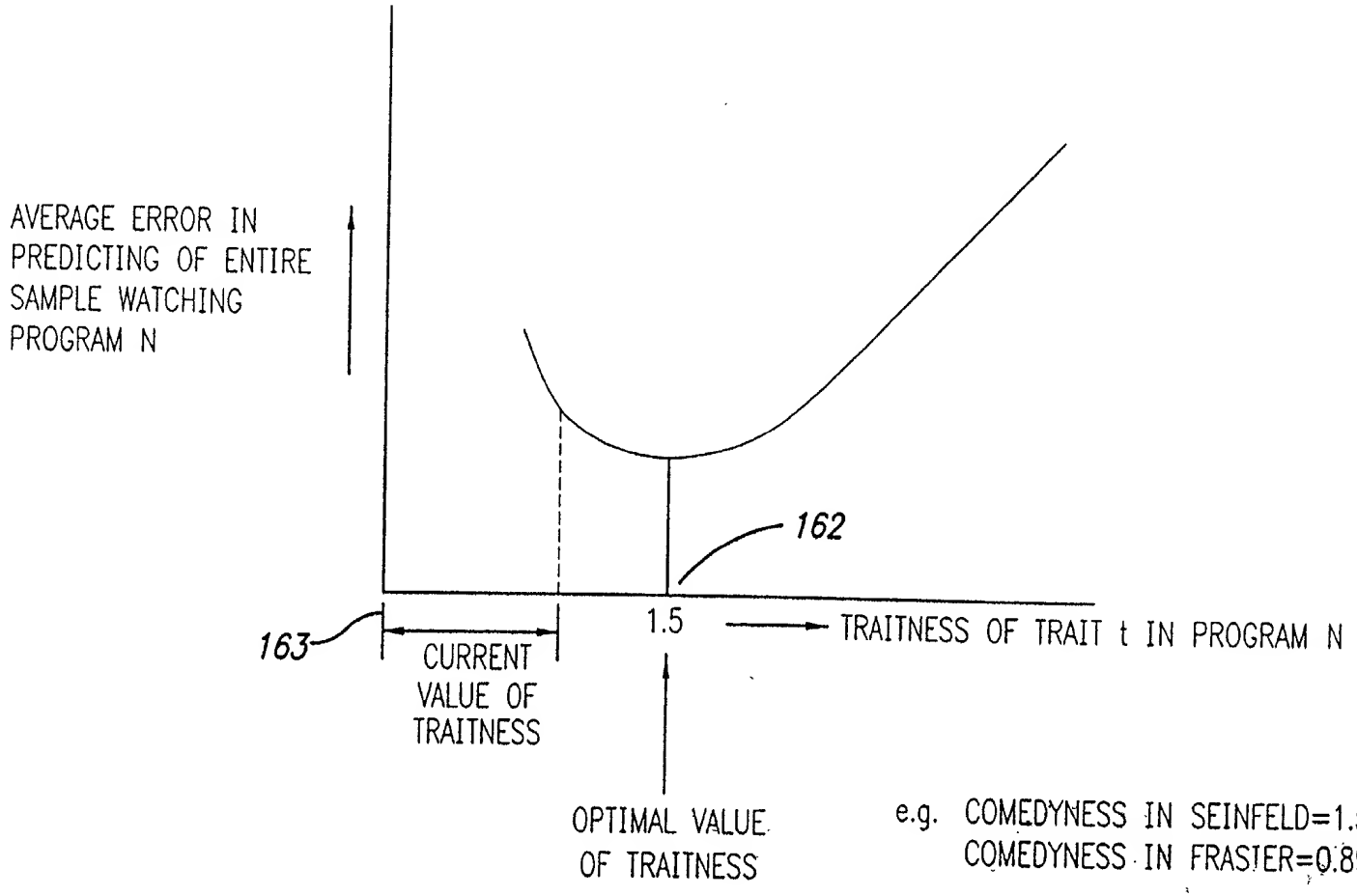


FIG. 10

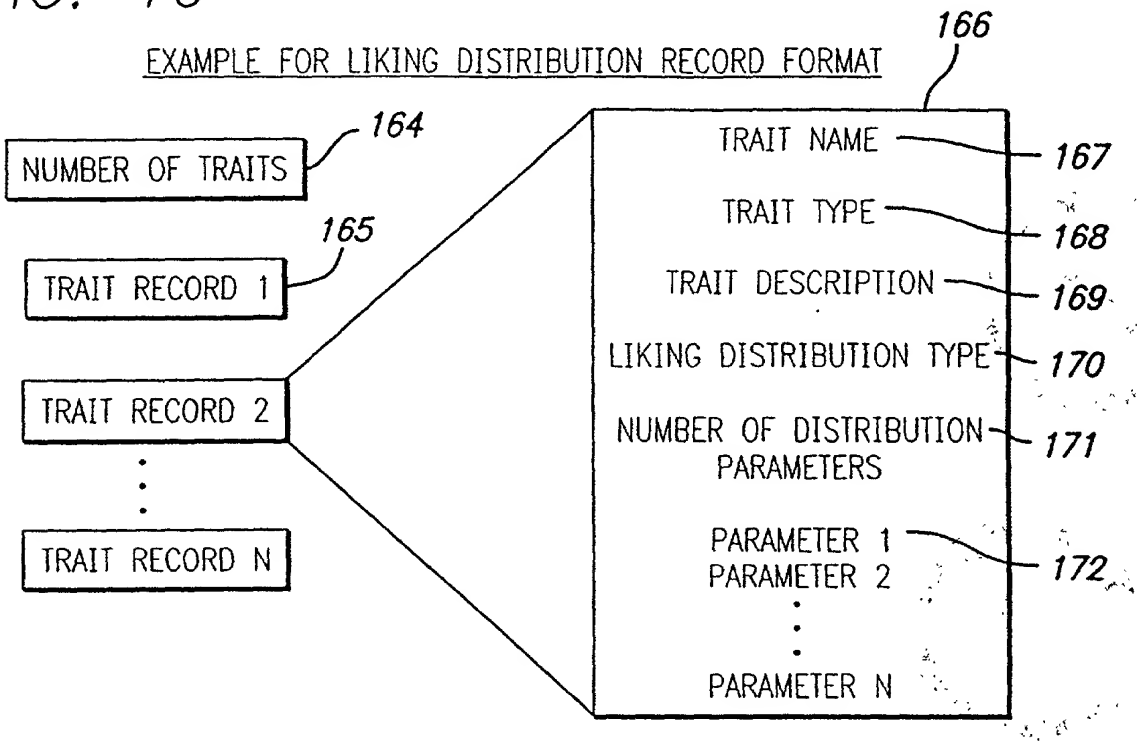

EXAMPLE FOR LIKING DISTRIBUTION RECORD FORMAT
166
NUMBER OF TRAITS
164
TRAIT RECORD 1
165
TRAIT RECORD 2
TRAIT RECORD N
TRAIT NAME
167
TRAIT TYPE
168
TRAIT DESCRIPTION
169
LIKING DISTRIBUTION TYPE
170
NUMBER OF DISTRIBUTION PARAMETERS
171
PARAMETER 1
PARAMETER 2
PARAMETER N
172

FIG. 12

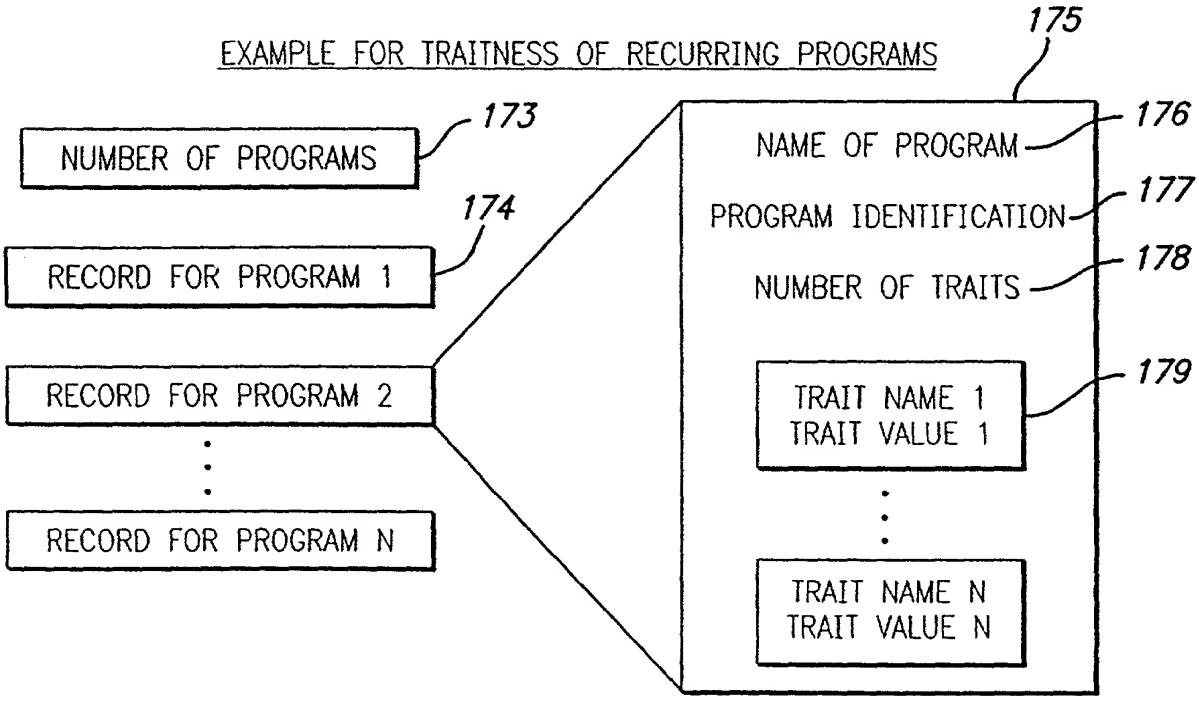

EXAMPLE FOR TRAITNESS OF RECURRING PROGRAMS
175
NUMBER OF PROGRAMS
173
RECORD FOR PROGRAM 1
174
RECORD FOR PROGRAM 2
RECORD FOR PROGRAM N
NAME OF PROGRAM
176
PROGRAM IDENTIFICATION
177
NUMBER OF TRAITS
178
TRAIT NAME 1
TRAIT VALUE 1
179
TRAIT NAME N
TRAIT VALUE N

FIG. 13

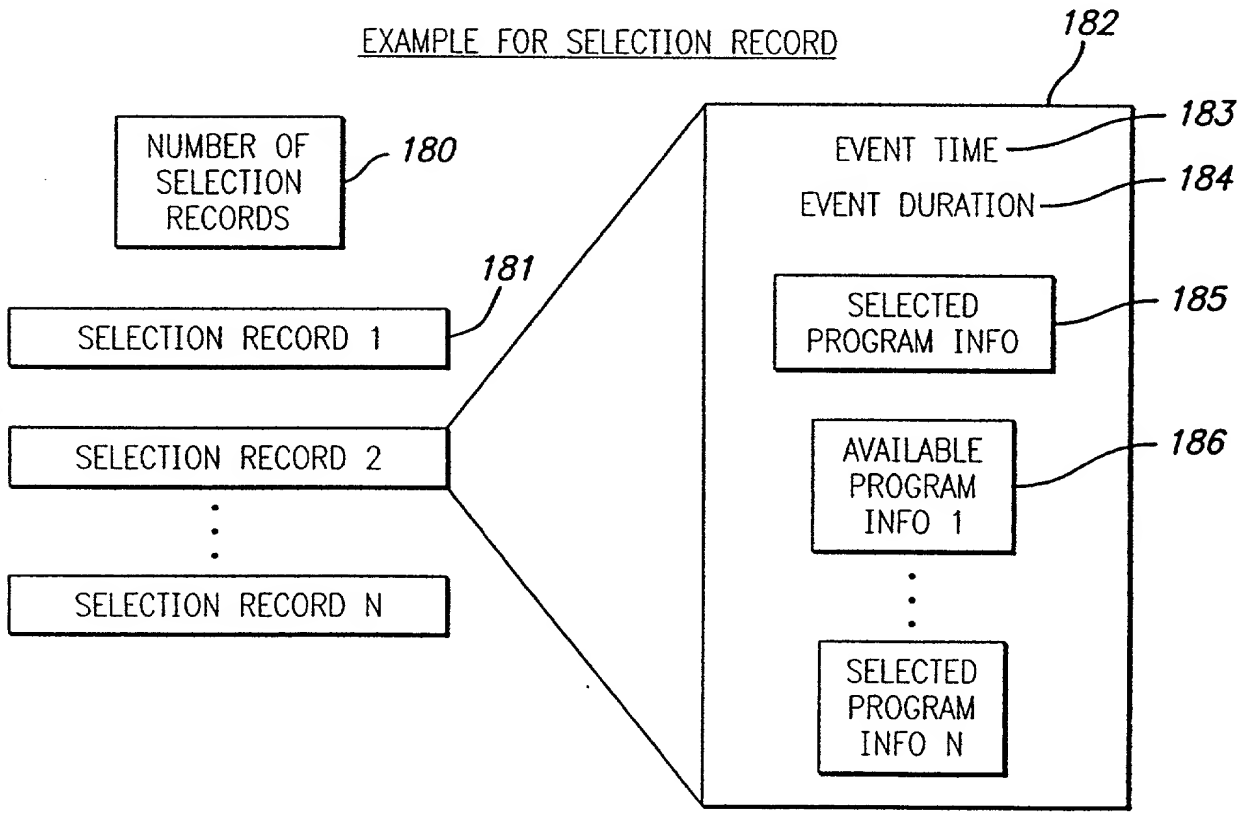
EXAMPLE FOR BROADCASTING TRAITNESS AS A PART OF EPG DATA

PROGRAM INFO

SEINFELD,
NBC,
COMEDY=0.07
SITCOM,
DYNAMIC TRAIT 1=0.1
⋮

ACTOR=SEINFELD

FIG. 14



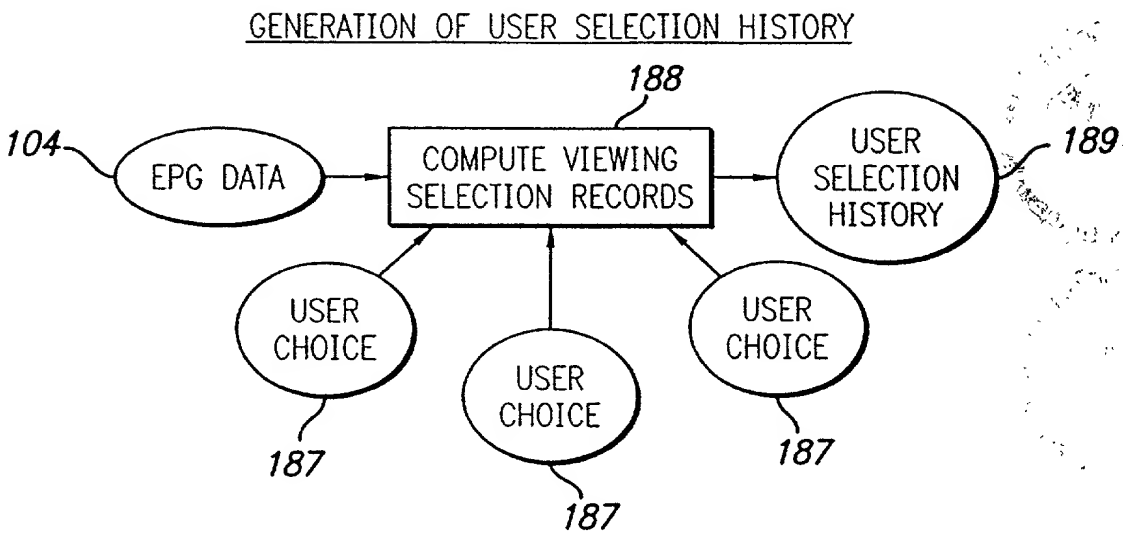


FIG. 15

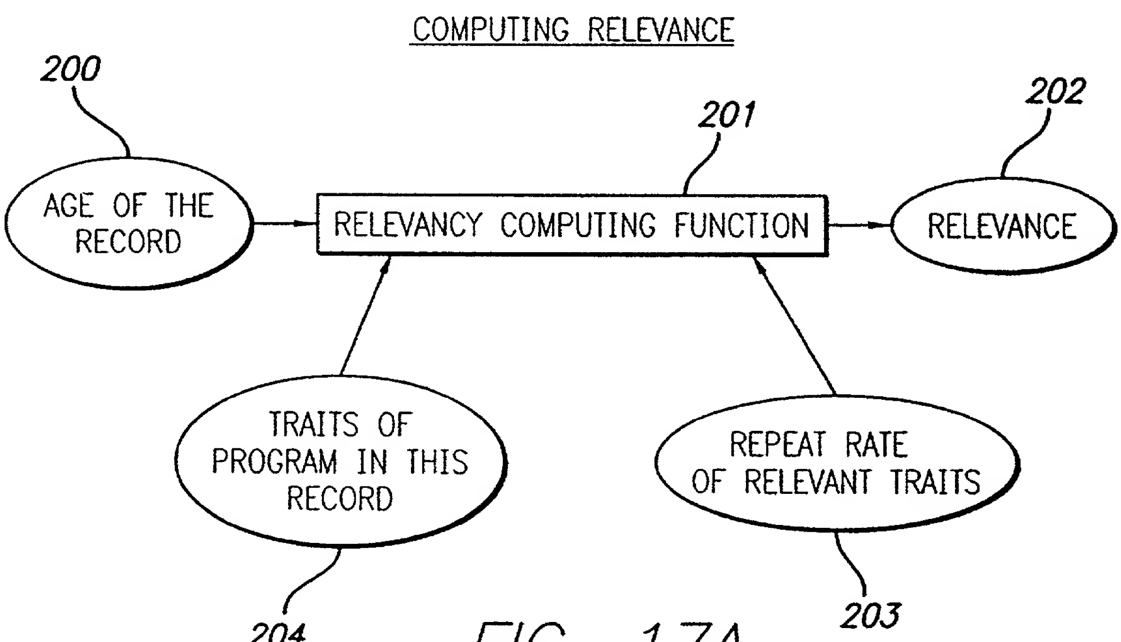
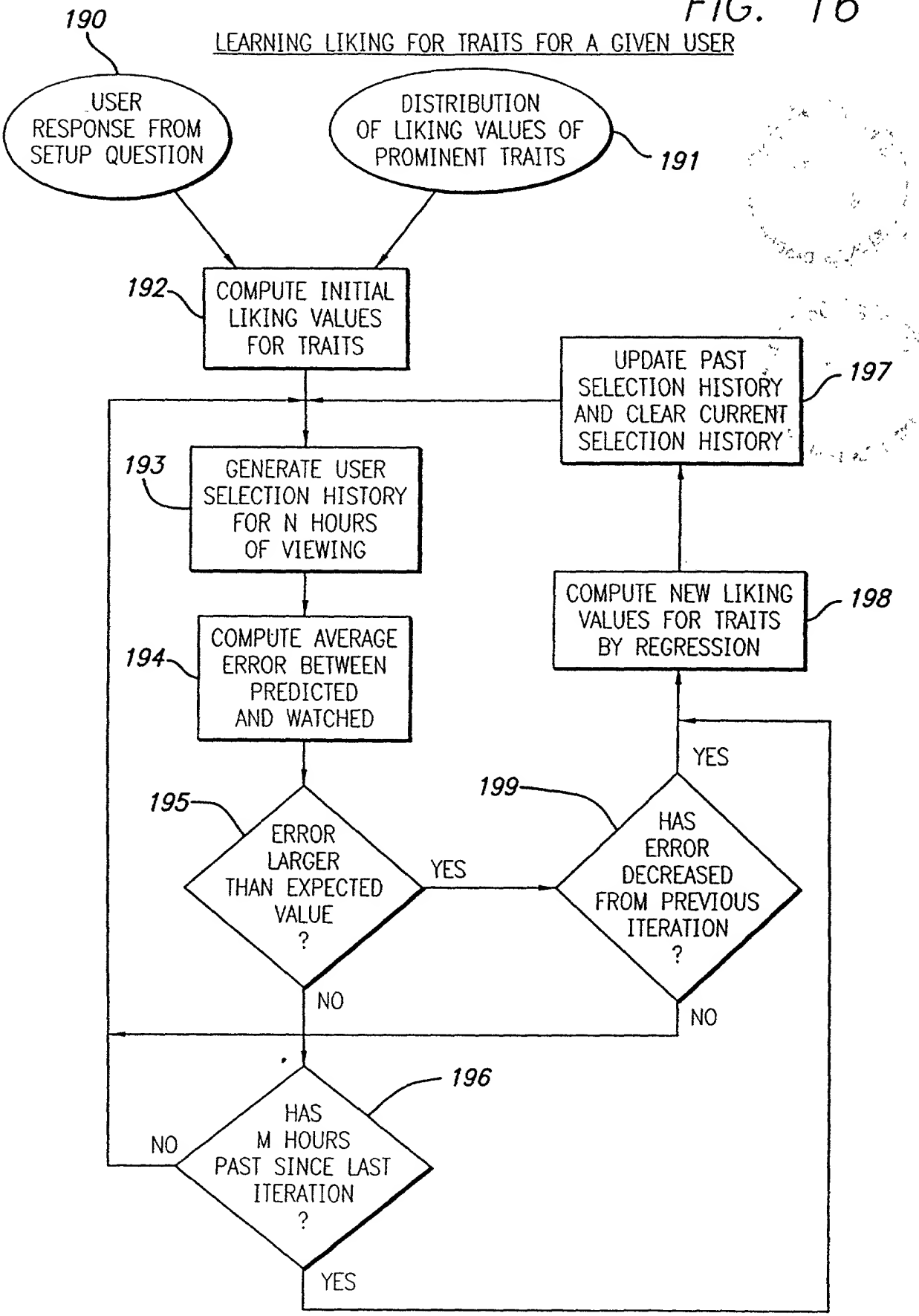


FIG. 17A

FIG. 16


190
LEARNING LIKING FOR TRAITS FOR A GIVEN USER
USER RESPONSE FROM SETUP QUESTION
DISTRIBUTION OF LIKING VALUES OF PROMINENT TRAITS
191
192
COMPUTE INITIAL LIKING VALUES FOR TRAITS
UPDATE PAST SELECTION HISTORY AND CLEAR CURRENT SELECTION HISTORY
197
193
GENERATE USER SELECTION HISTORY FOR N HOURS OF VIEWING
COMPUTE NEW LIKING VALUES FOR TRAITS BY REGRESSION
198
194
COMPUTE AVERAGE ERROR BETWEEN PREDICTED AND WATCHED
YES
199
195
ERROR LARGER THAN EXPECTED VALUE ?
YES
HAS ERROR DECREASED FROM PREVIOUS ITERATION ?
NO
NO
196
HAS M HOURS PAST SINCE LAST ITERATION ?
NO
YES

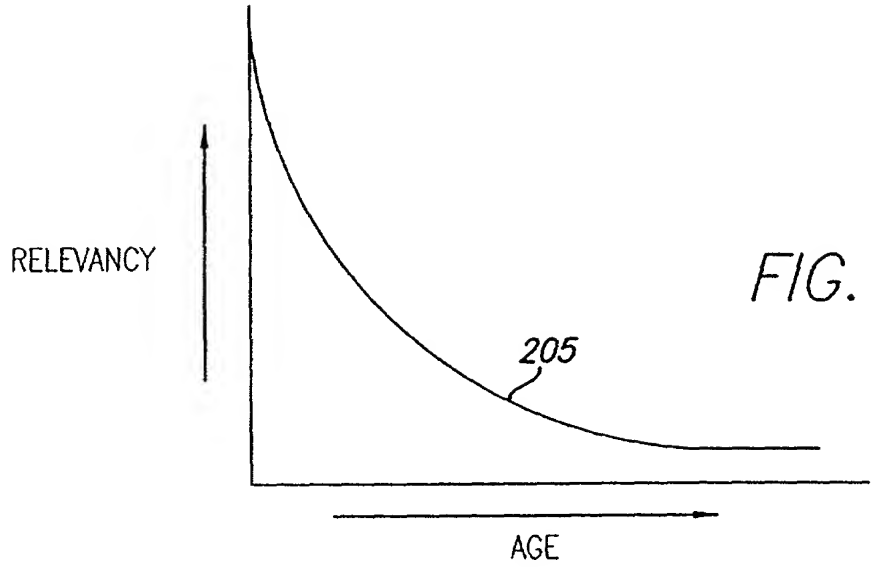


FIG. 17B

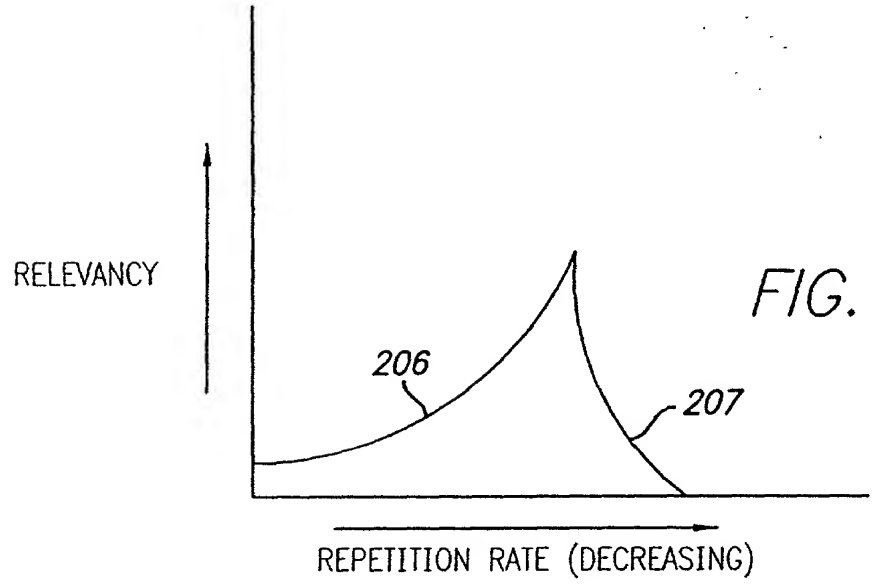


FIG. 17C

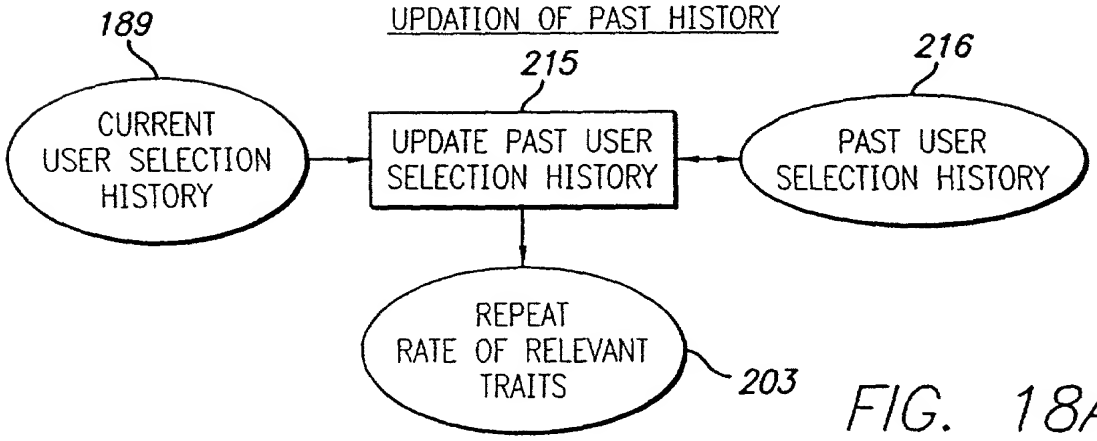


FIG. 18A

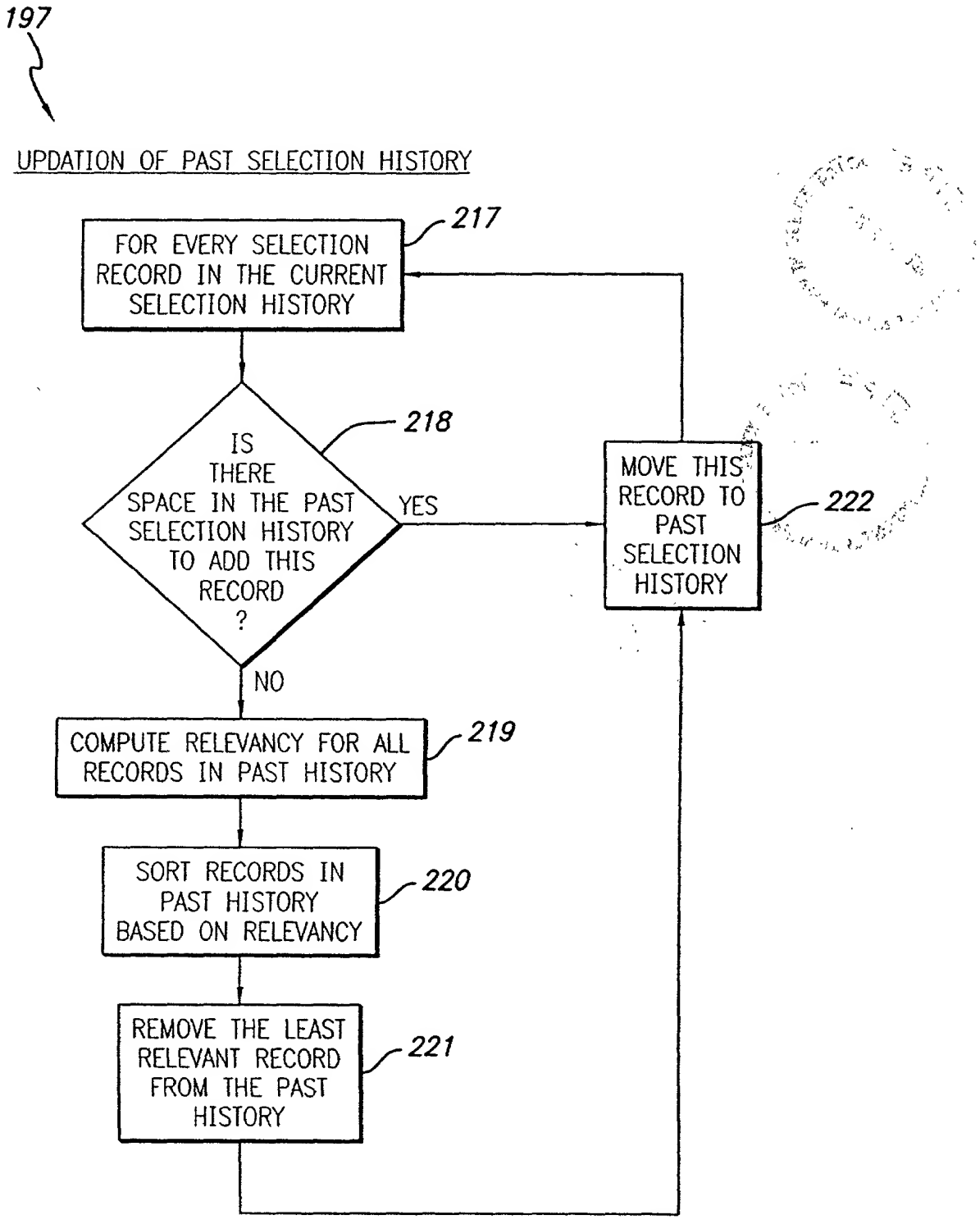

197
UPDATION OF PAST SELECTION HISTORY
FOR EVERY SELECTION RECORD IN THE CURRENT SELECTION HISTORY
217
IS THERE SPACE IN THE PAST SELECTION HISTORY TO ADD THIS RECORD ?
218
YES
NO
MOVE THIS RECORD TO PAST SELECTION HISTORY
222
COMPUTE RELEVANCY FOR ALL RECORDS IN PAST HISTORY
219
SORT RECORDS IN PAST HISTORY BASED ON RELEVANCY
220
REMOVE THE LEAST RELEVANT RECORD FROM THE PAST HISTORY
221

FIG. 18B

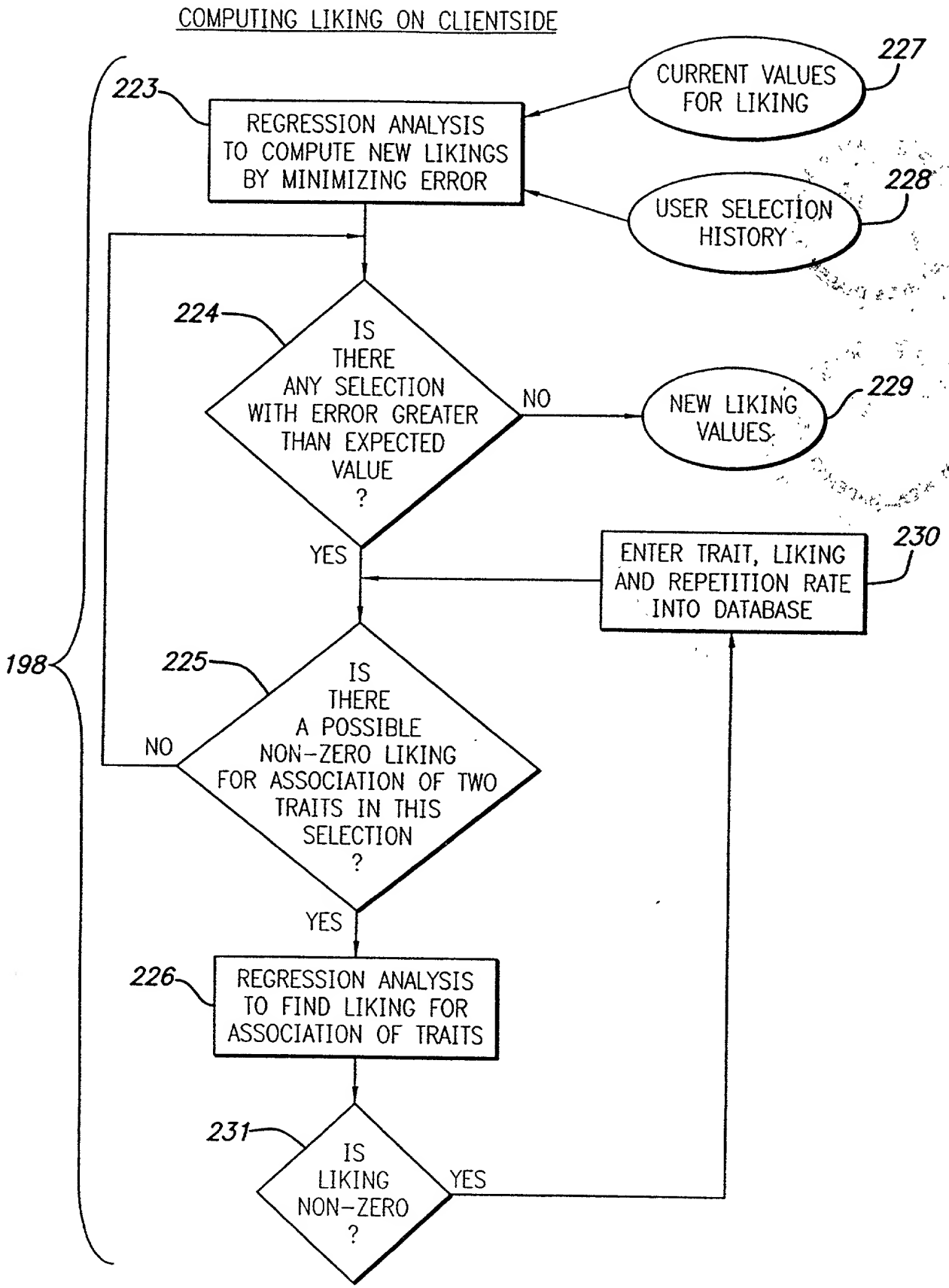

COMPUTING LIKING ON CLIENTSIDE
227
CURRENT VALUES FOR LIKING
223
REGRESSION ANALYSIS TO COMPUTE NEW LIKINGS BY MINIMIZING ERROR
228
USER SELECTION HISTORY
224
IS THERE ANY SELECTION WITH ERROR GREATER THAN EXPECTED VALUE ?
NO
229
NEW LIKING VALUES
YES
230
ENTER TRAIT, LIKING AND REPETITION RATE INTO DATABASE
198
225
IS THERE A POSSIBLE NON-ZERO LIKING FOR ASSOCIATION OF TWO TRAITS IN THIS SELECTION ?
NO
YES
226
REGRESSION ANALYSIS TO FIND LIKING FOR ASSOCIATION OF TRAITS
231
IS LIKING NON-ZERO ?
YES

FIG. 19

COMPUTING SCORES FOR PROGRAMS FOR FUTURE PREDICTION

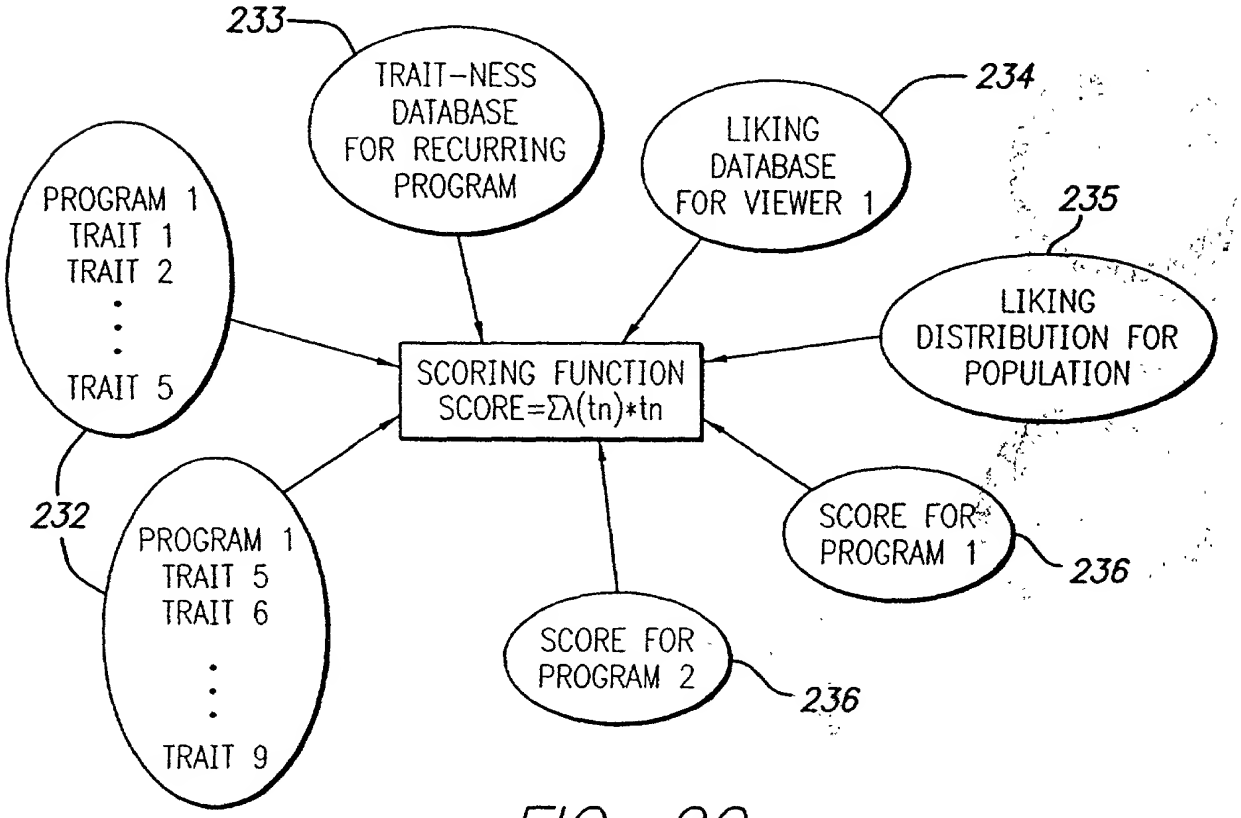


FIG. 20

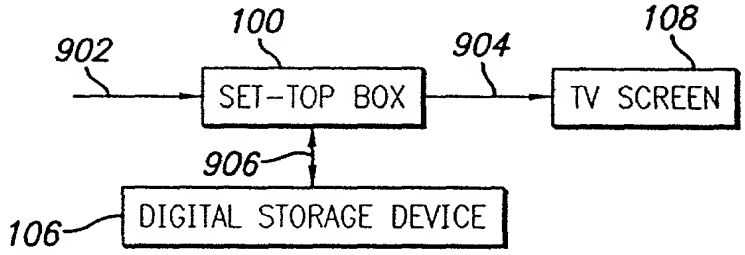


FIG. 26A

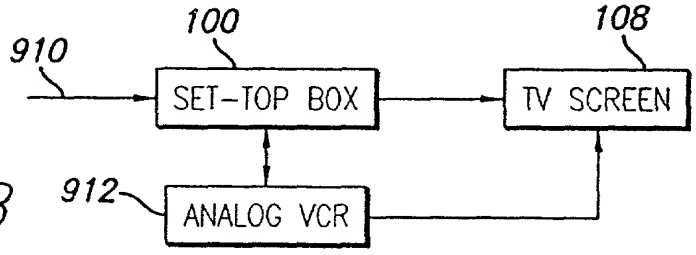
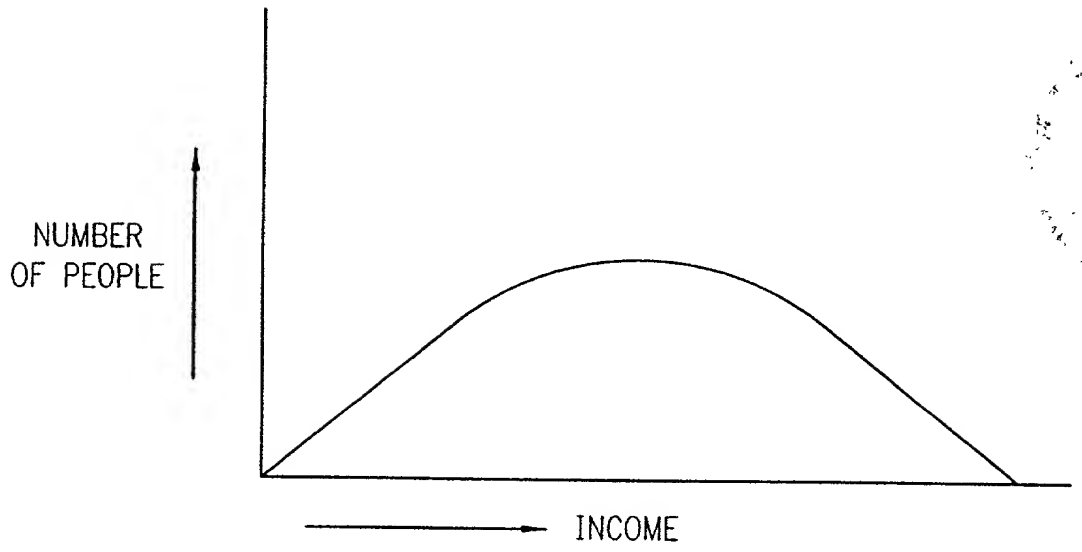


FIG. 26B



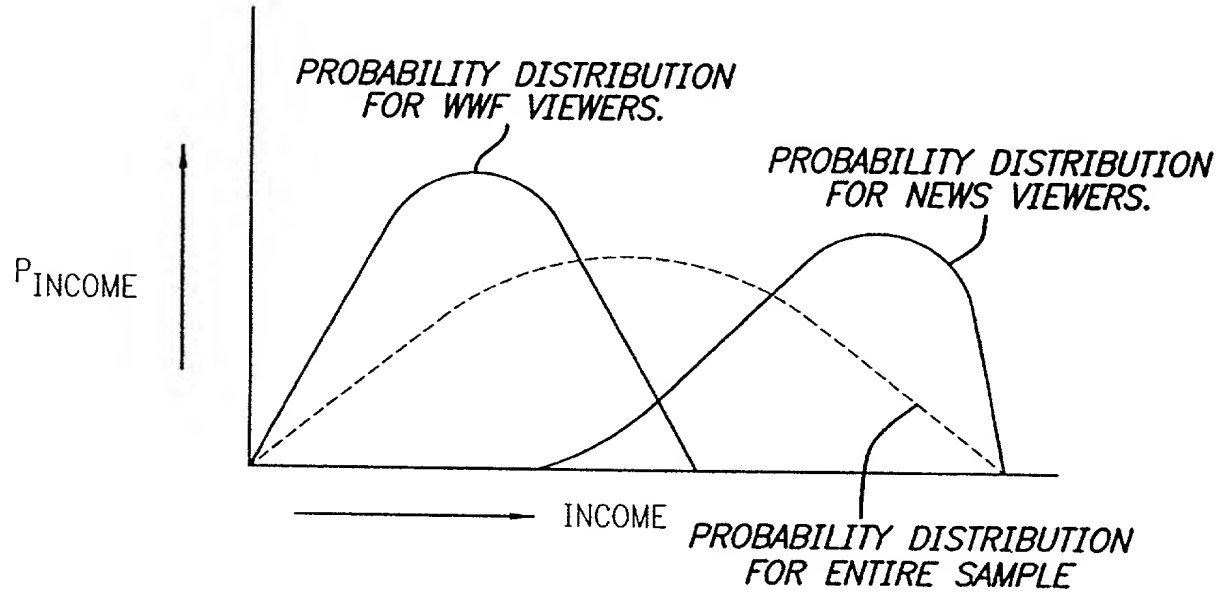


FIG. 21A

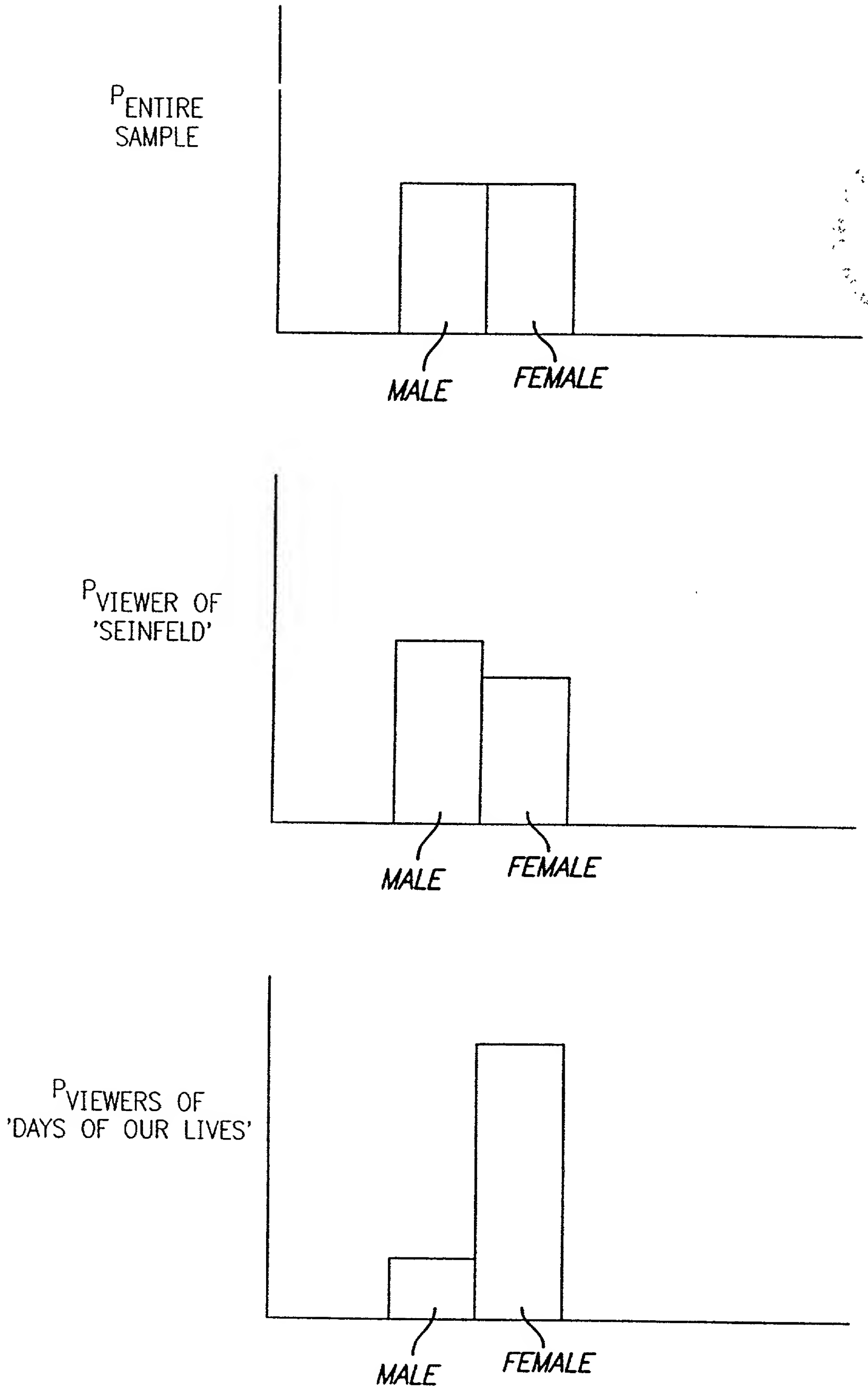

P ENTIRE SAMPLE
MALE
FEMALE
P VIEWER OF 'SEINFELD'
MALE
FEMALE
P VIEWERS OF 'DAYS OF OUR LIVES'
MALE
FEMALE

FIG. 21B

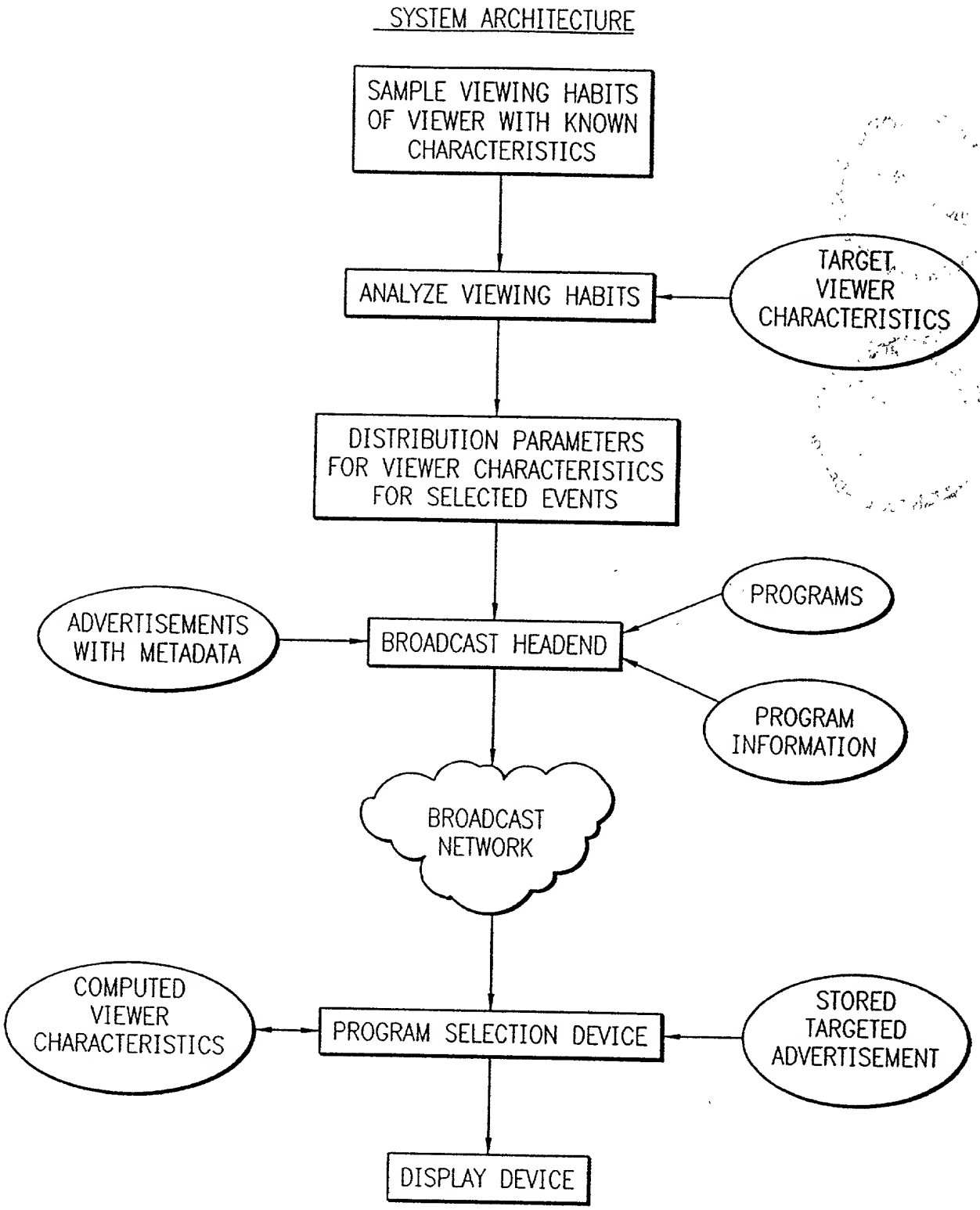


FIG. 22

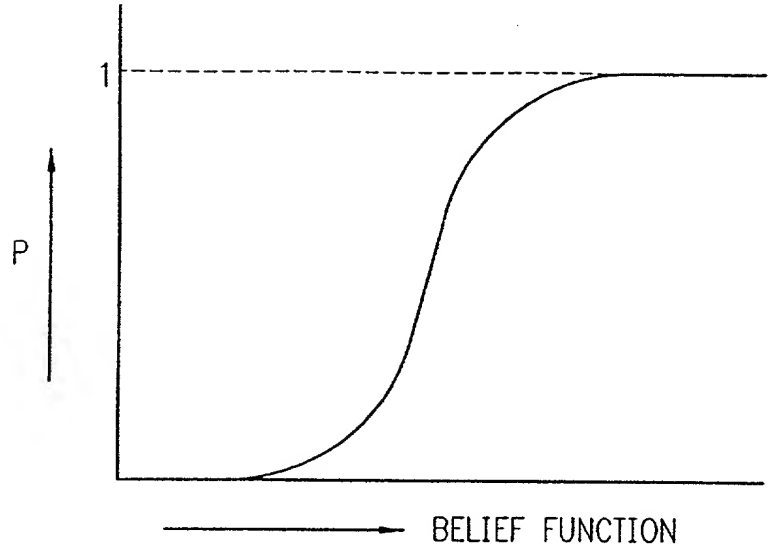


FIG. 23A

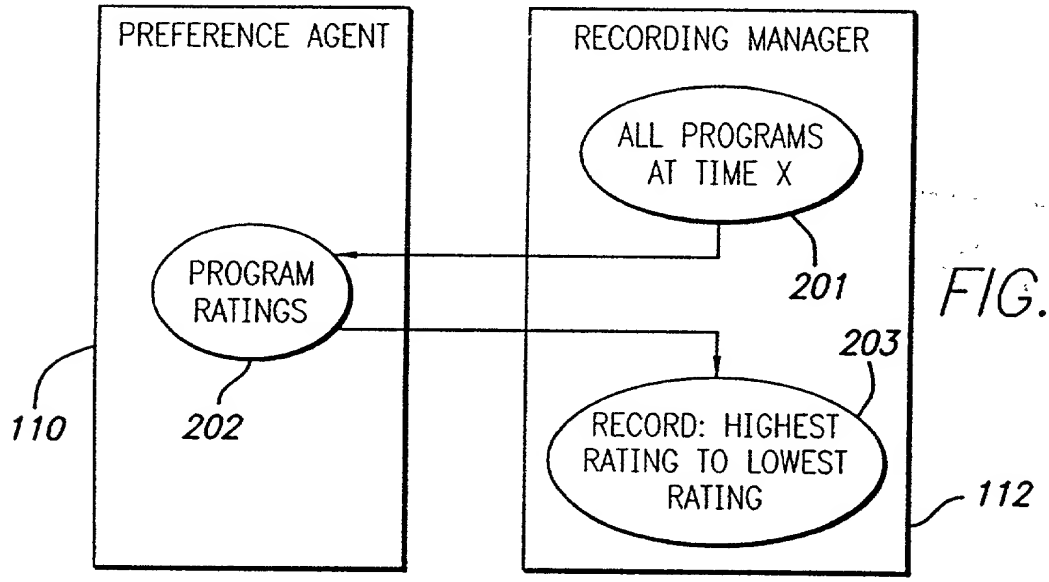


FIG. 24

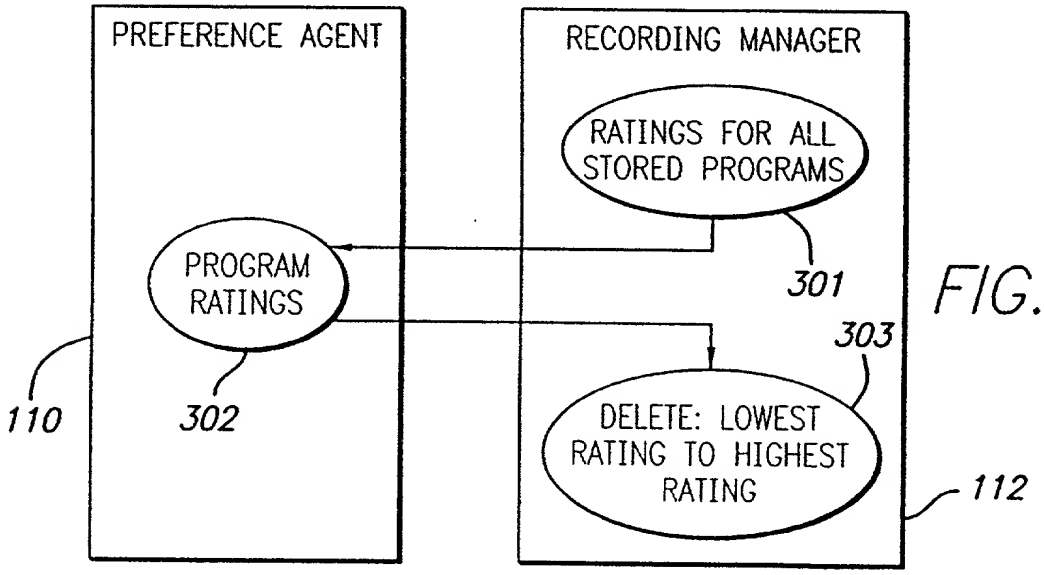


FIG. 25

DEMOGRAPHIC TRAIT RECORD FORMAT

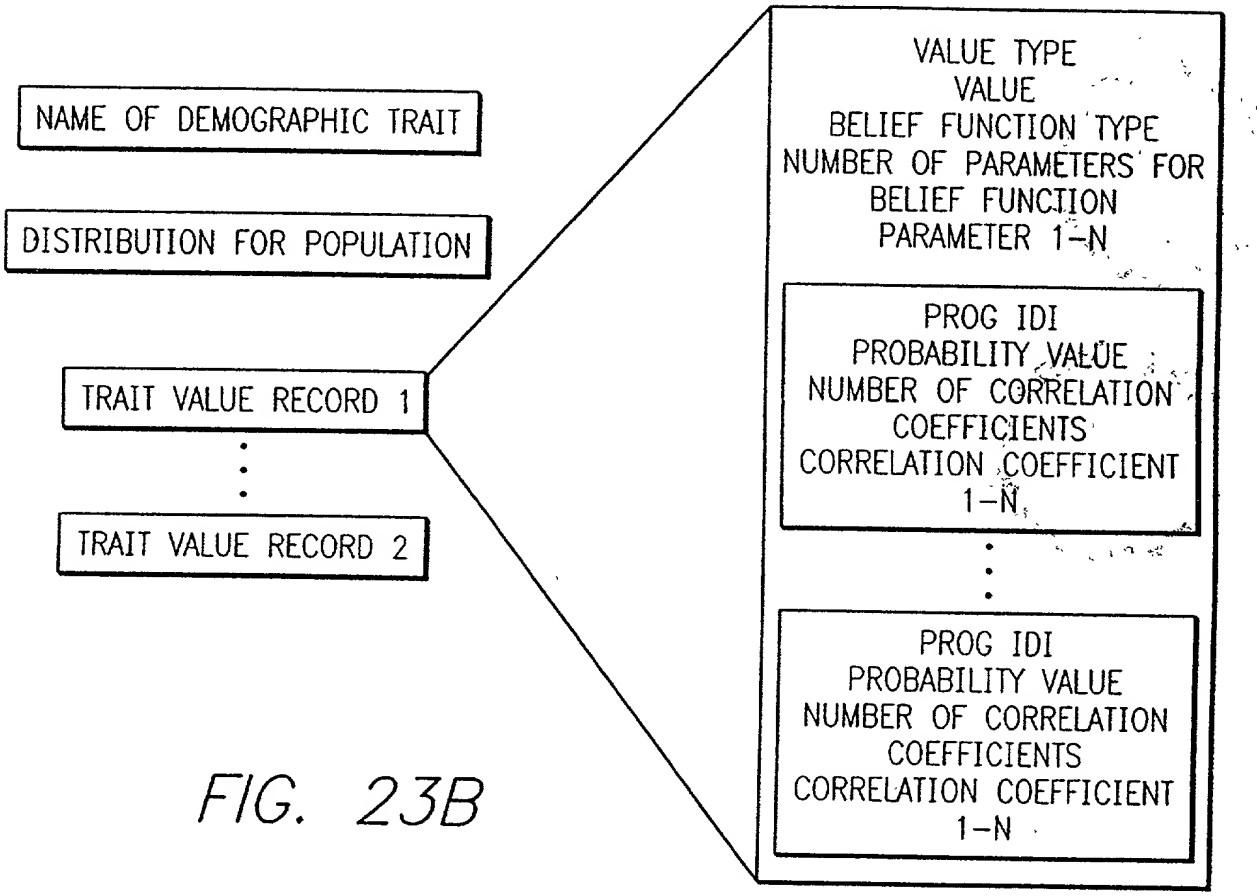


FIG. 23B

ADVERTISEMENT TARGETING RECORD FORMAT

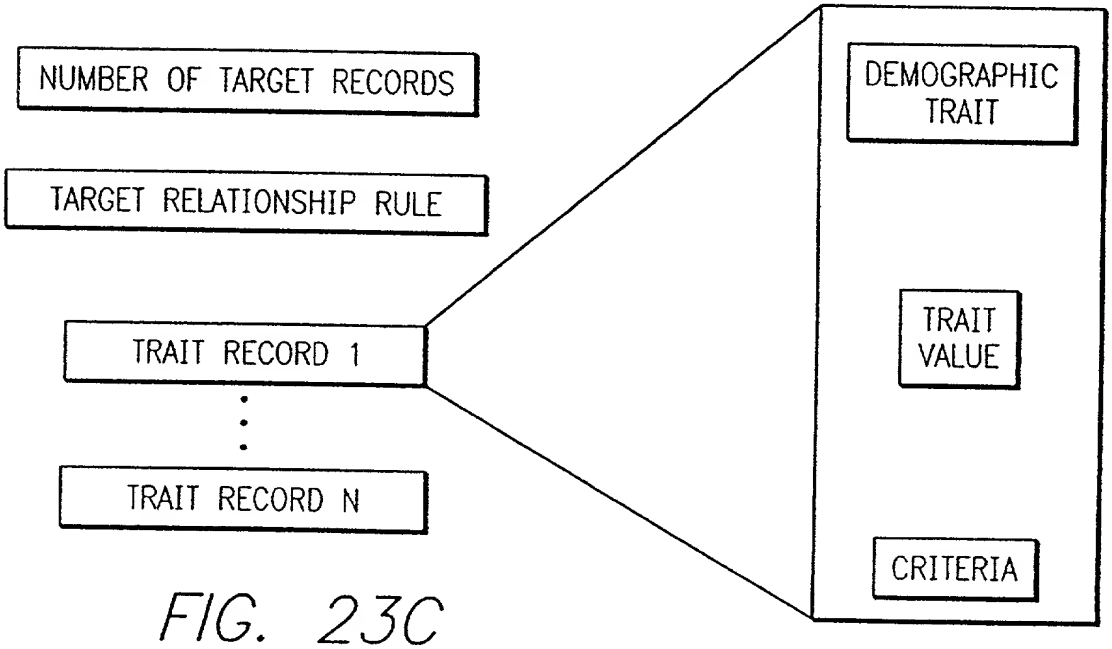


FIG. 23C

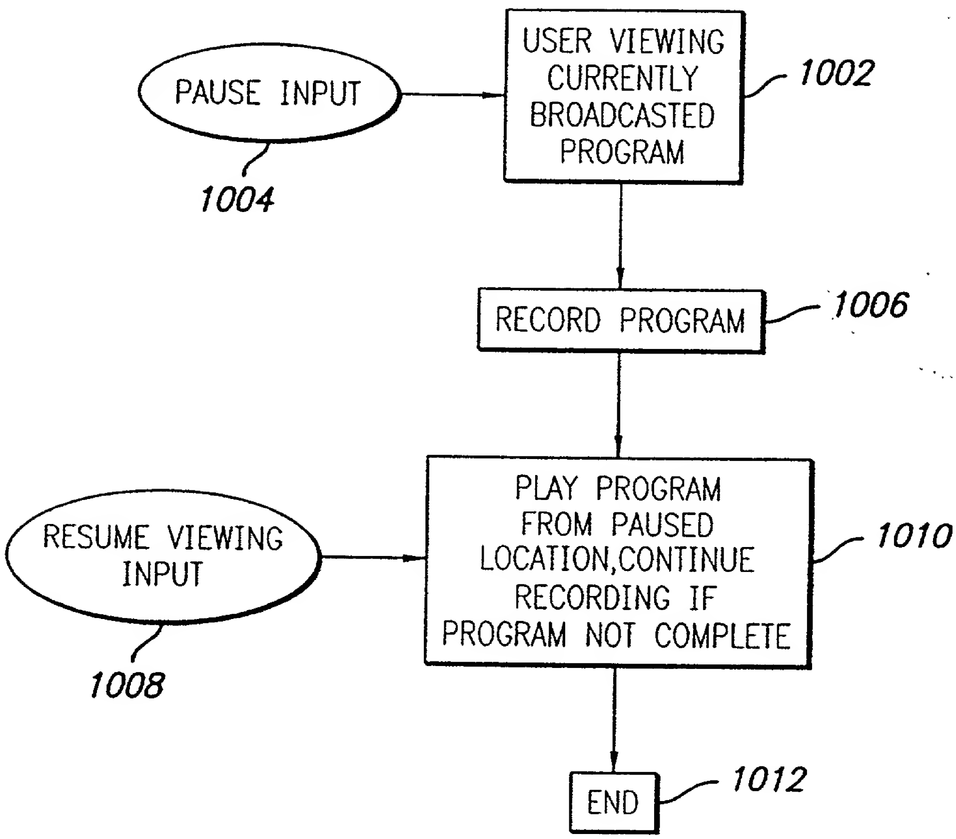

PAUSE INPUT
USER VIEWING CURRENTLY BROADCASTED PROGRAM
1002
1004
RECORD PROGRAM
1006
RESUME VIEWING INPUT
PLAY PROGRAM FROM PAUSED LOCATION,CONTINUE RECORDING IF PROGRAM NOT COMPLETE
1010
1008
END
1012

FIG. 27

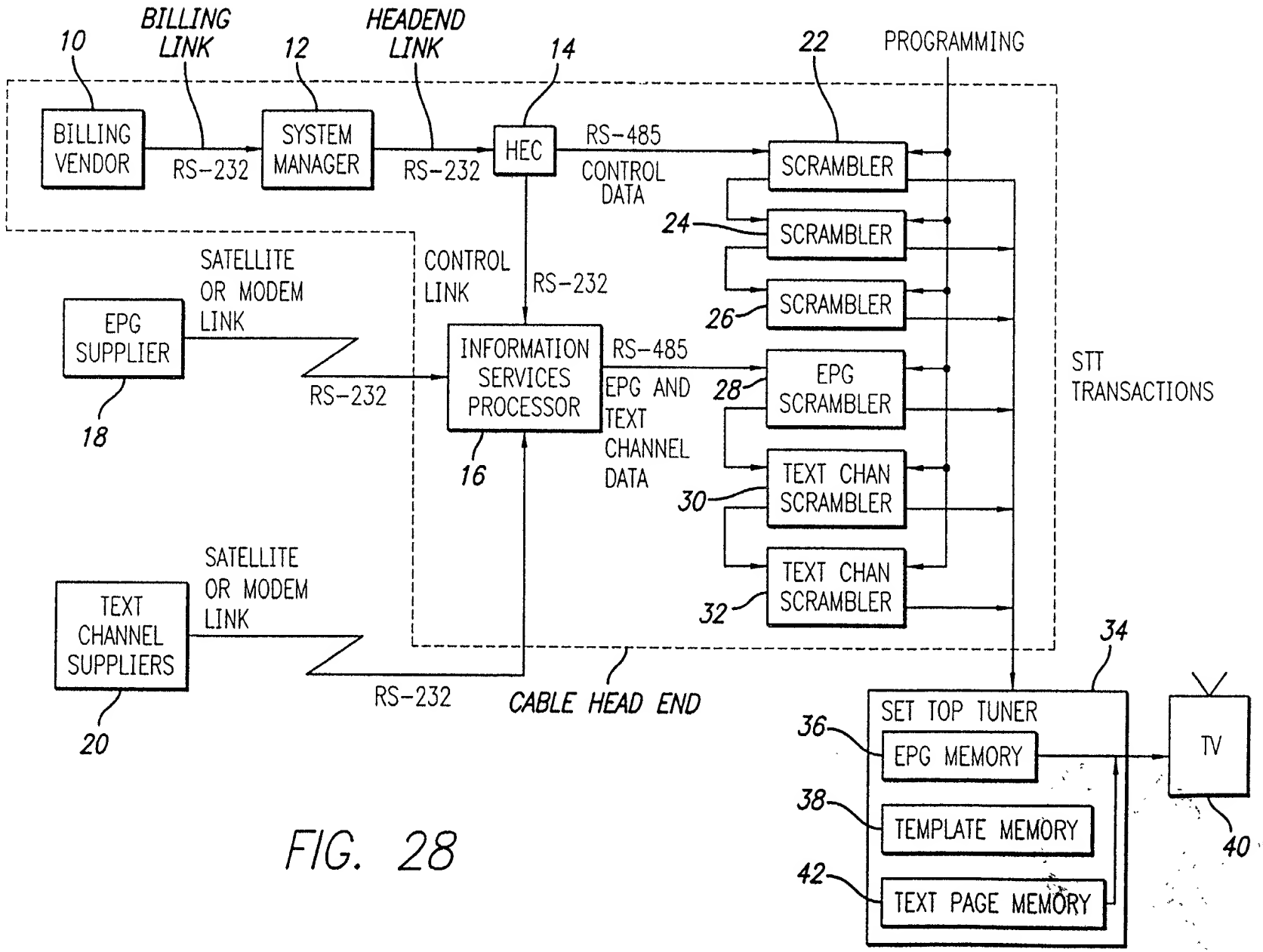
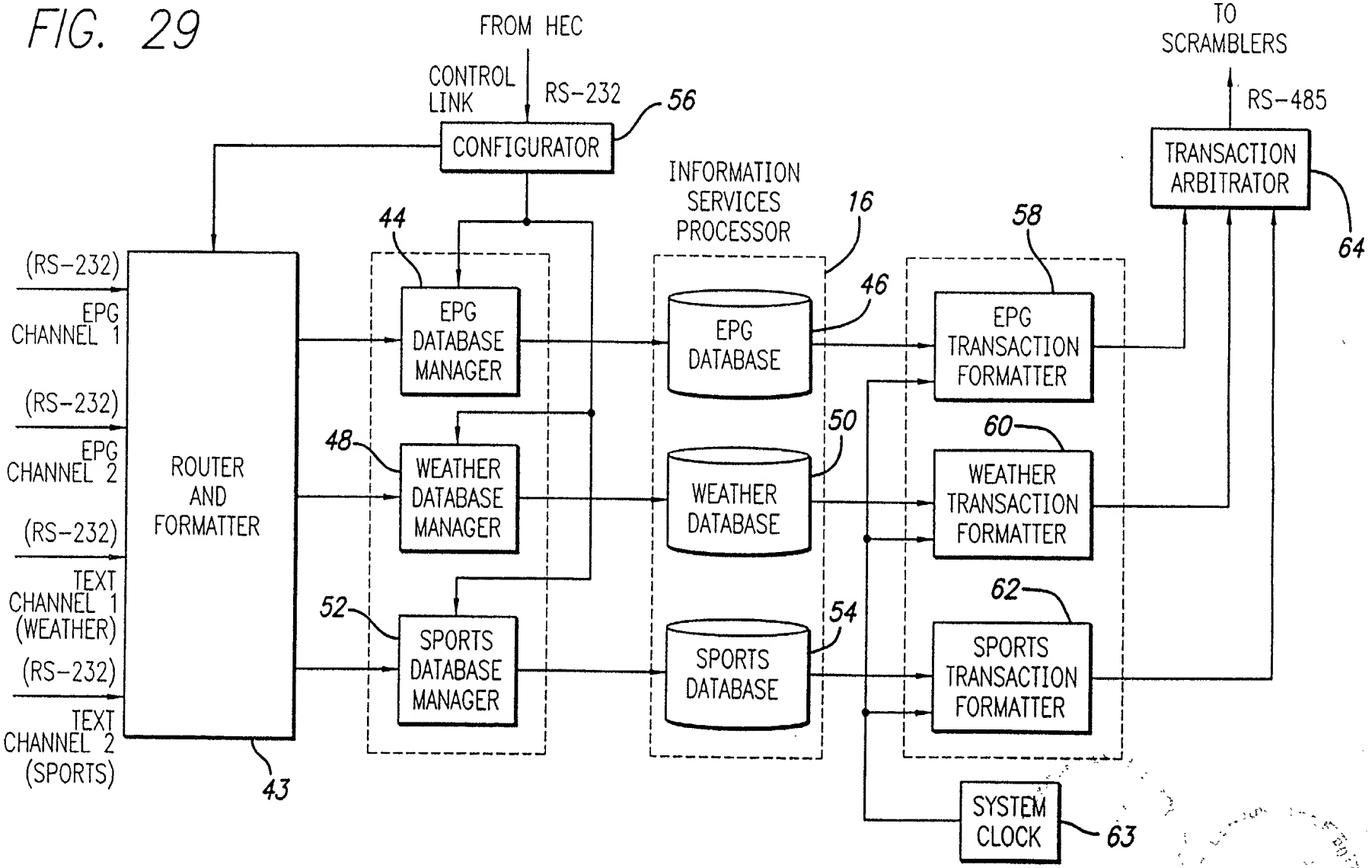

10
BILLING LINK
12
HEADEND LINK
14
22
PROGRAMMING
BILLING VENDOR
RS-232
SYSTEM MANAGER
RS-232
HEC
RS-485
CONTROL DATA
SCRAMBLER
24
SCRAMBLER
26
SCRAMBLER
SATELLITE OR MODEM LINK
CONTROL LINK
RS-232
EPG SUPPLIER
18
INFORMATION SERVICES PROCESSOR
16
RS-485
EPG AND TEXT CHANNEL DATA
28
EPG SCRAMBLER
30
TEXT CHAN SCRAMBLER
32
TEXT CHAN SCRAMBLER
STT TRANSACTIONS
SATELLITE OR MODEM LINK
TEXT CHANNEL SUPPLIERS
20
RS-232
CABLE HEAD END
34
SET TOP TUNER
36
EPG MEMORY
38
TEMPLATE MEMORY
42
TEXT PAGE MEMORY
TV
40

FIG. 28

FIG. 29


FROM HEC
CONTROL LINK
RS-232
56
CONFIGURATOR
TO SCRAMBLERS
RS-485
TRANSACTION ARBITRATOR
64
INFORMATION SERVICES PROCESSOR
16
44
58
(RS-232)
EPG CHANNEL 1
(RS-232)
EPG CHANNEL 2
(RS-232)
TEXT CHANNEL 1 (WEATHER)
(RS-232)
TEXT CHANNEL 2 (SPORTS)
ROUTER AND FORMATTER
43
EPG DATABASE MANAGER
46
EPG DATABASE
EPG TRANSACTION FORMATTER
48
50
60
WEATHER DATABASE MANAGER
WEATHER DATABASE
WEATHER TRANSACTION FORMATTER
52
54
62
SPORTS DATABASE MANAGER
SPORTS DATABASE
SPORTS TRANSACTION FORMATTER
SYSTEM CLOCK
63

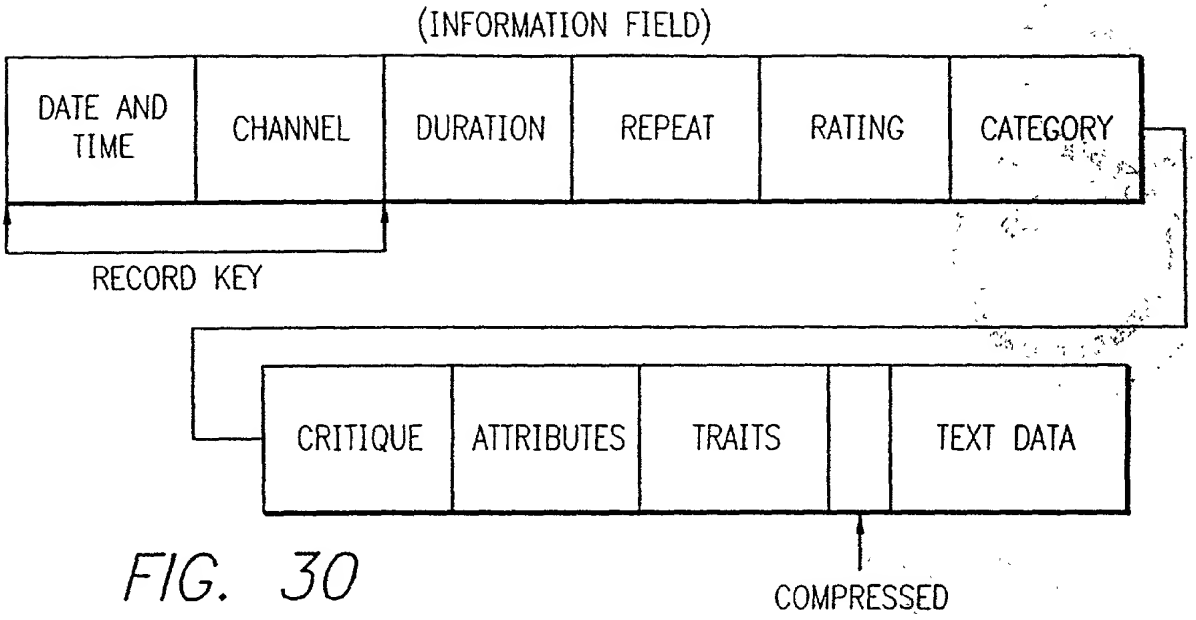


FIG. 30

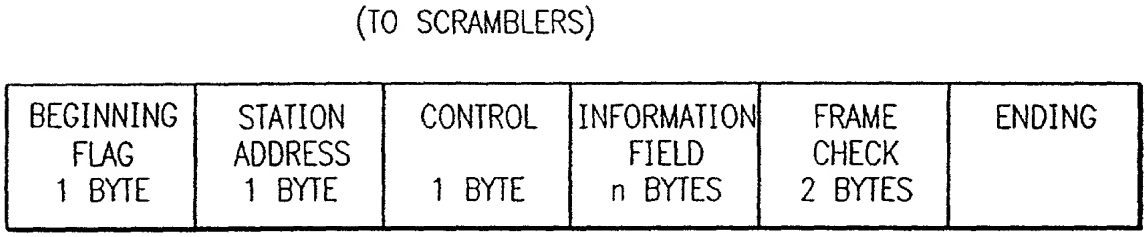


FIG. 31

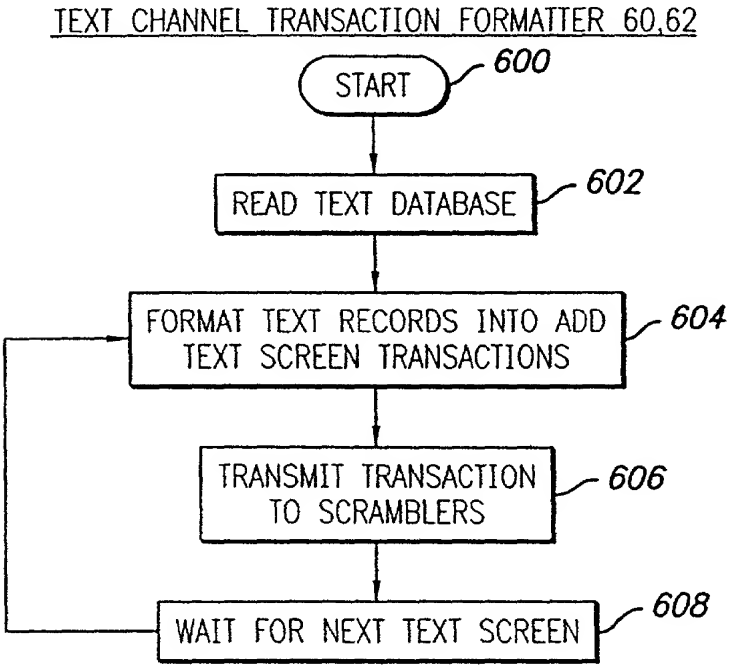


FIG. 33

EPG TRANSACTION FORMATTER 58

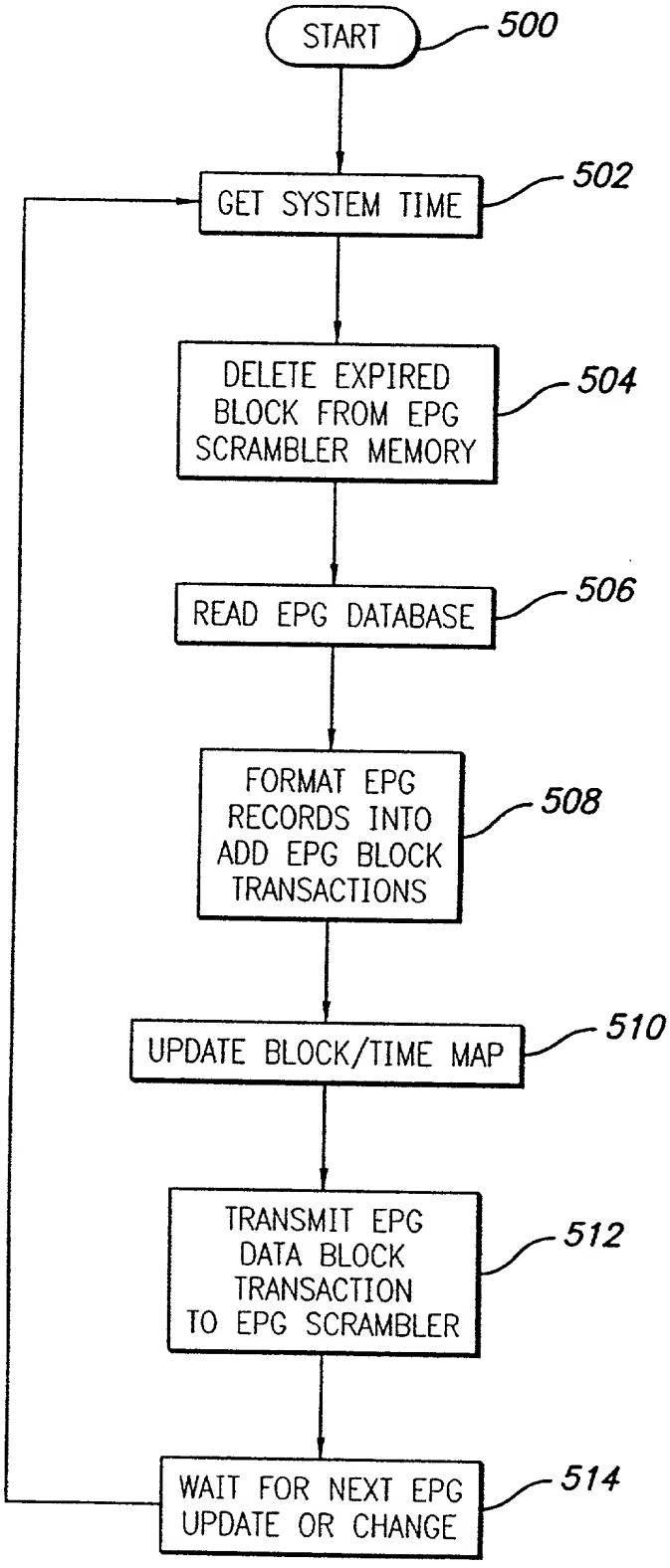


FIG. 32

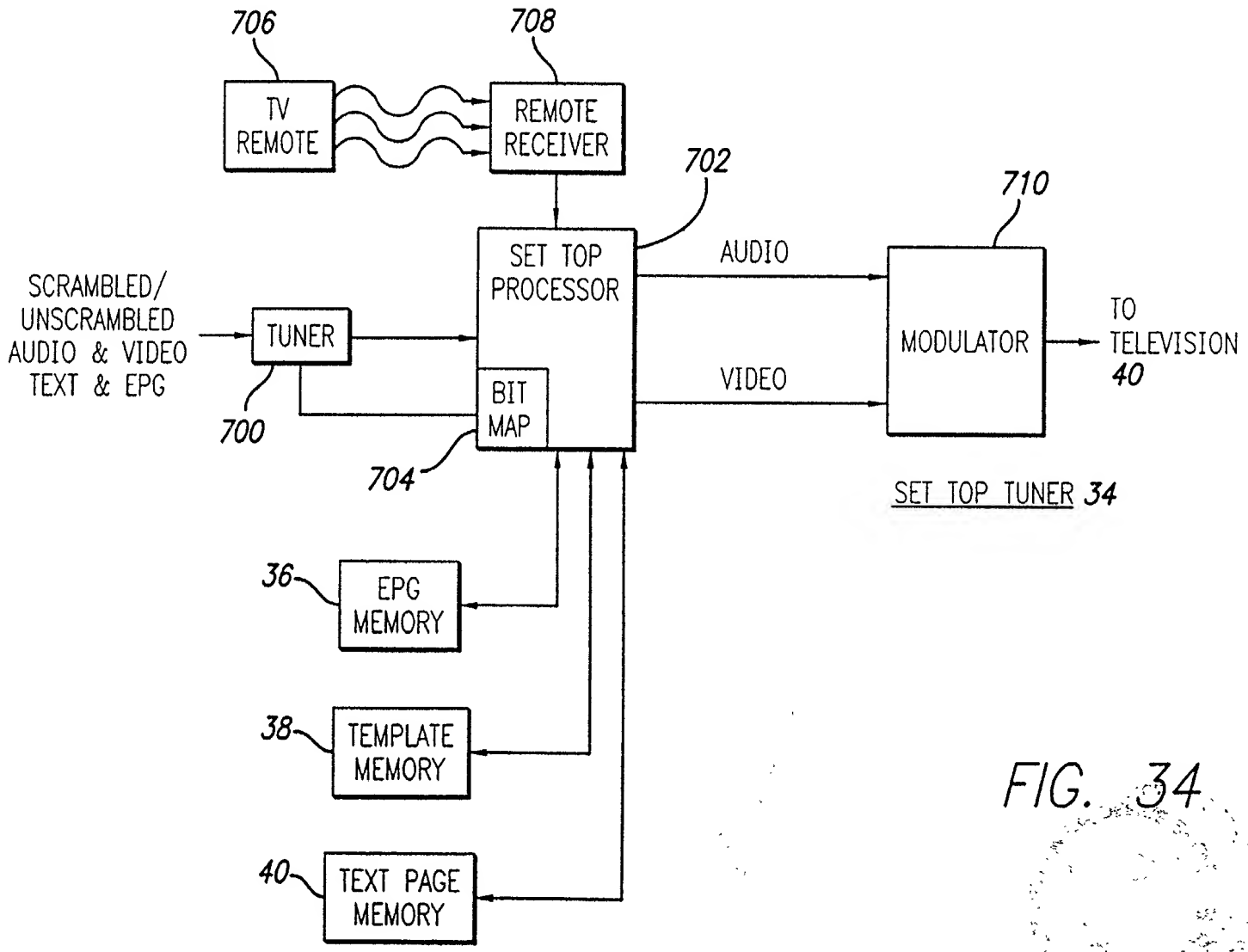

706
708
TV REMOTE
REMOTE RECEIVER
702
710
SET TOP PROCESSOR
AUDIO
MODULATOR
TO TELEVISION
40
SCRAMBLED/ UNSCRAMBLED AUDIO & VIDEO TEXT & EPG
TUNER
VIDEO
BIT MAP
700
704
SET TOP TUNER 34
36
EPG MEMORY
38
TEMPLATE MEMORY
40
TEXT PAGE MEMORY

FIG. 34

PROCESS FOR AUTOMATICALLY CREATING MULTIPLE PROFILES AND AUTOMATICALLY IDENTIFYING CURRENTLY ACTIVE PROFILES

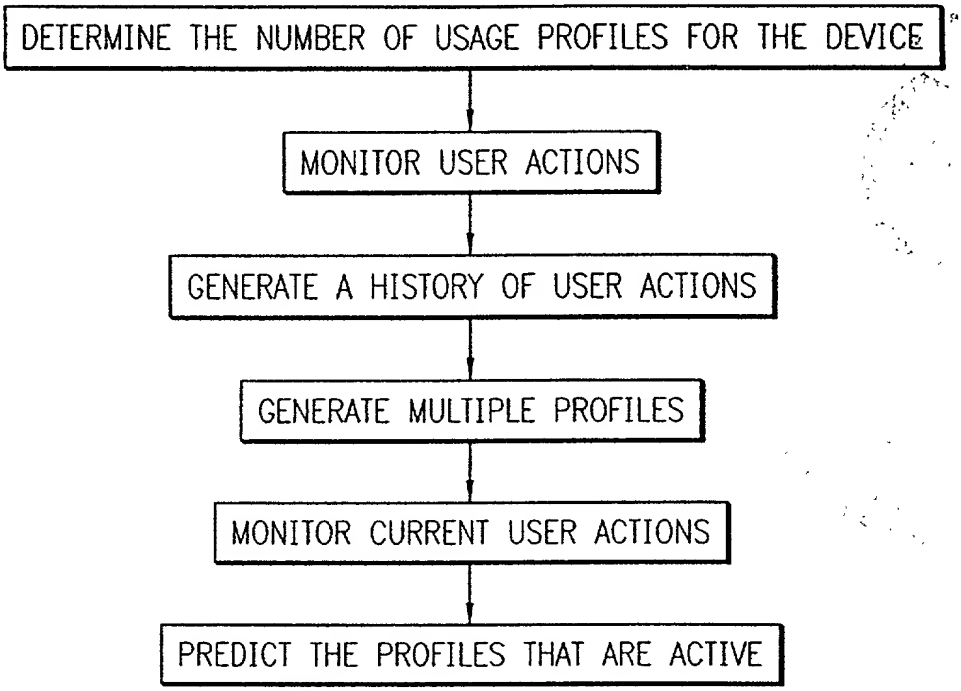


FIG. 35

PROCESS FOR GENERATING MULTIPLE PROFILES

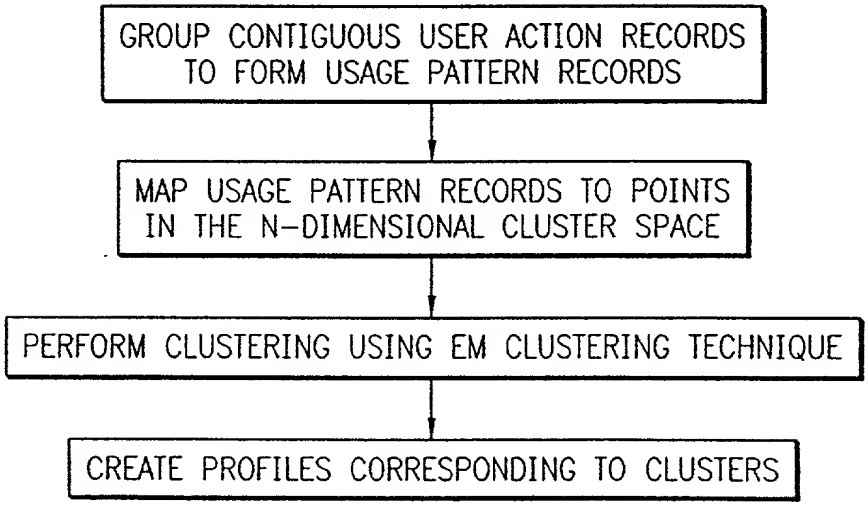


FIG. 36

ACTION
START TIME
END TIME
PARAMETERS

B) FORMAT OF USER ACTION RECORD

CHANNEL CHANGE
38720100
38720110
NBC

B) EXAMPLE OF USER ACTION RECORD

NUMBER OF ACTION RECORDS
ACTION RECORD 1
ACTION RECORD 2
⋮
ACTION RECORD N

C) FORMAT OF HISTORY DATABASE

NUMBER OF ACTION RECORDS
ACTION RECORD 1
ACTION RECORD 2
⋮
ACTION RECORD N

D) FORMAT OF USAGE PATTERN RECORD

FIG. 37

PROCESS FOR PREDICTING CURRENTLY ACTIVE PROFILES

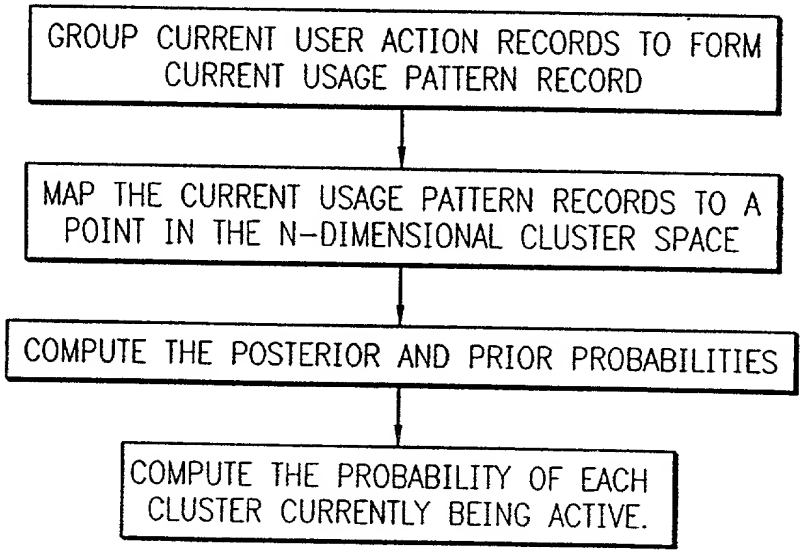
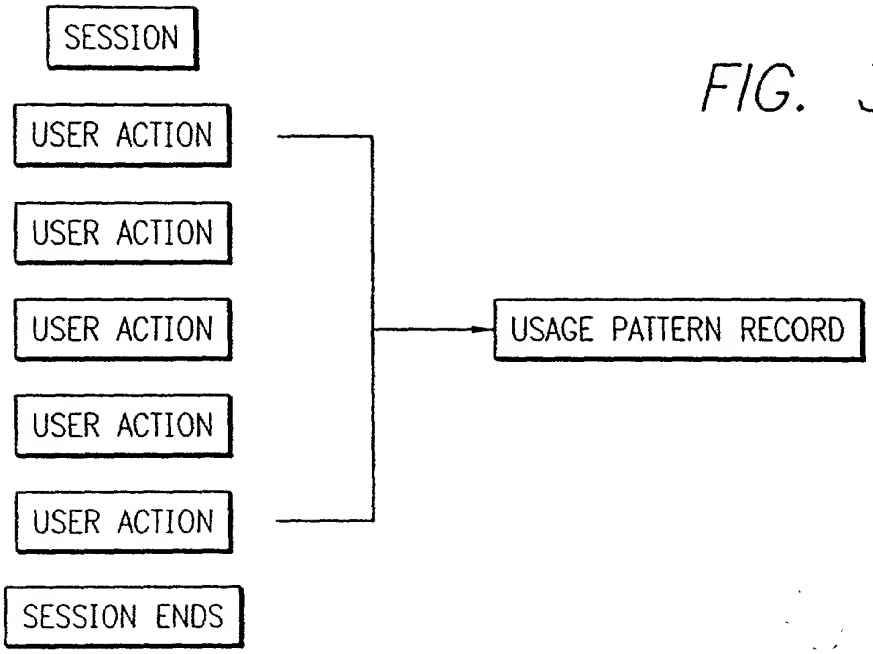
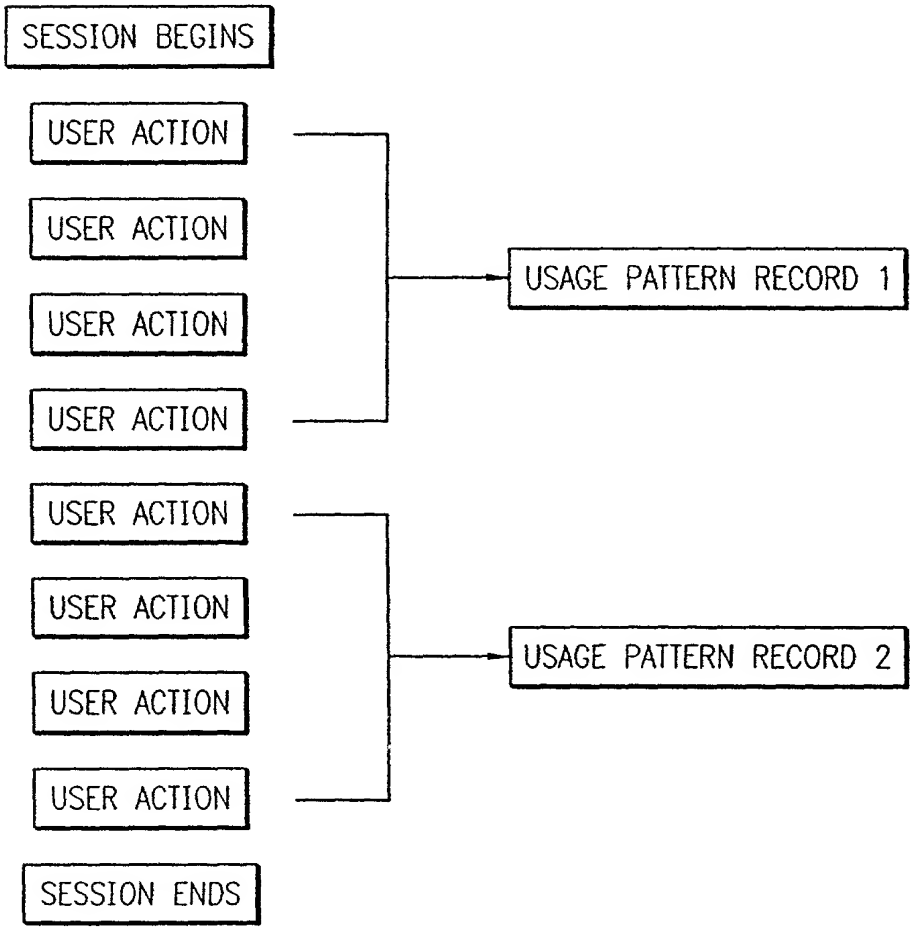


FIG. 40

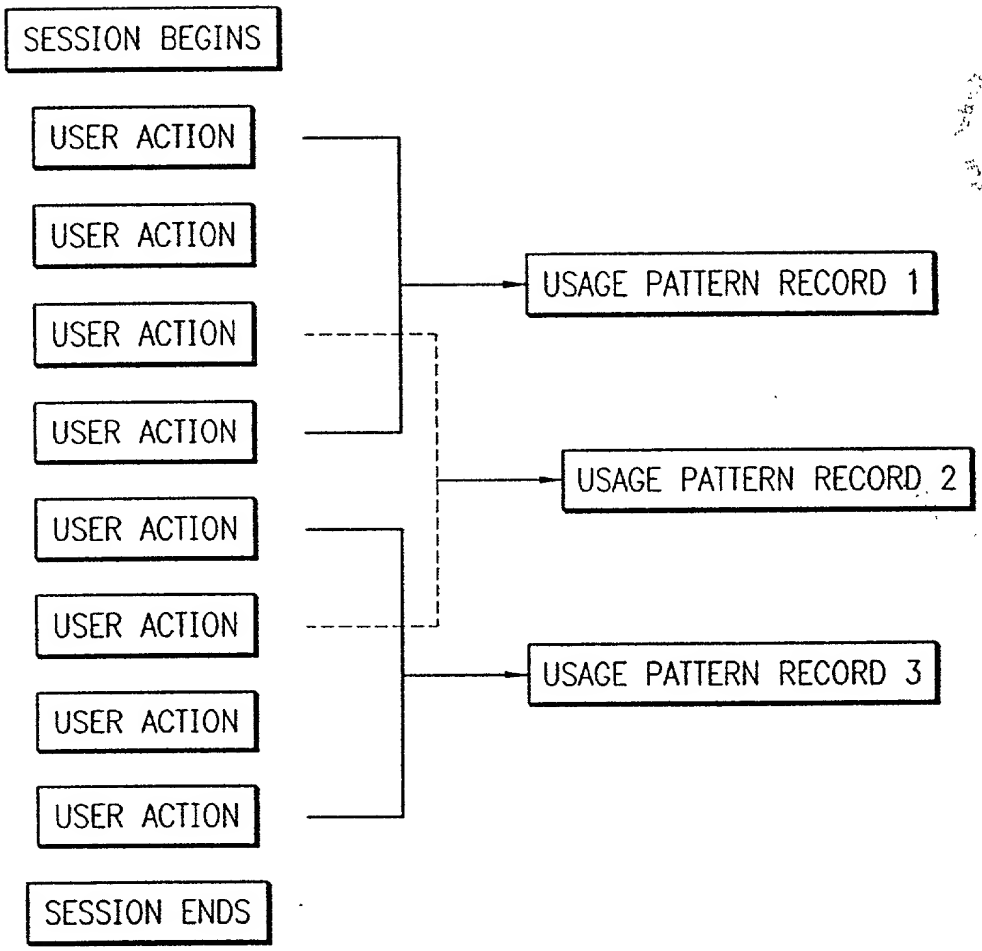
FIG. 38



A) ONE METHOD FOR CREATING USAGE PATTERN



B) ONE METHOD FOR CREATING USAGE PATTERN



ONE METHOD FOR CREATING USAGE PATTERN RECORD

FIG. 39

PROFILE CREATION USING GENERATED CLUSTERS

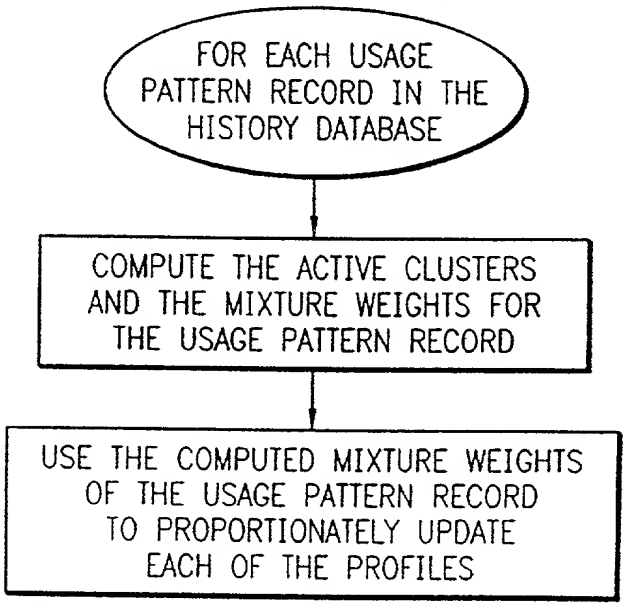
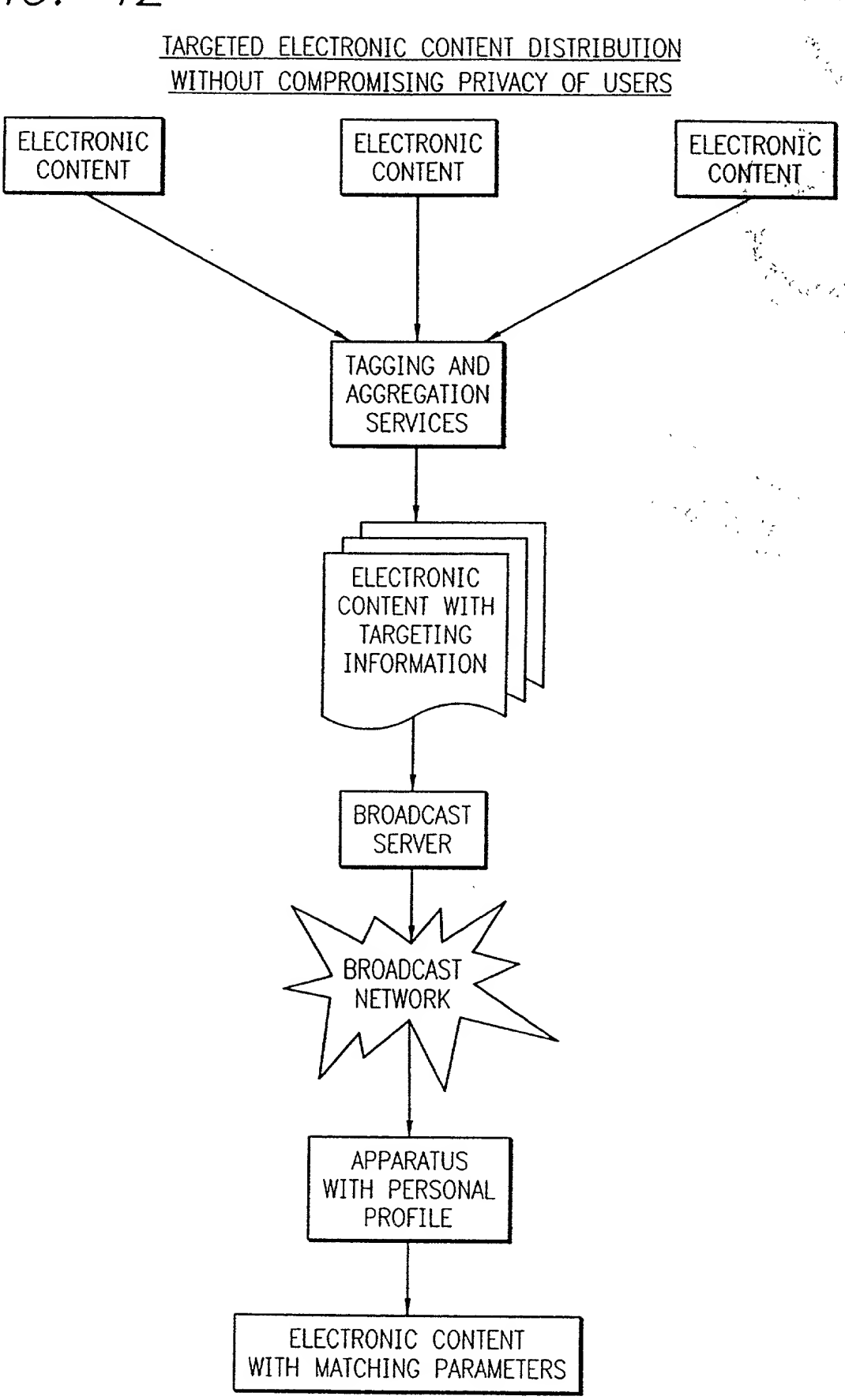


FIG. 41

FIG. 42


TARGETED ELECTRONIC CONTENT DISTRIBUTION
WITHOUT COMPROMISING PRIVACY OF USERS
ELECTRONIC CONTENT
ELECTRONIC CONTENT
ELECTRONIC CONTENT
TAGGING AND AGGREGATION SERVICES
ELECTRONIC CONTENT WITH TARGETING INFORMATION
BROADCAST SERVER
BROADCAST NETWORK
APPARATUS WITH PERSONAL PROFILE
ELECTRONIC CONTENT WITH MATCHING PARAMETERS

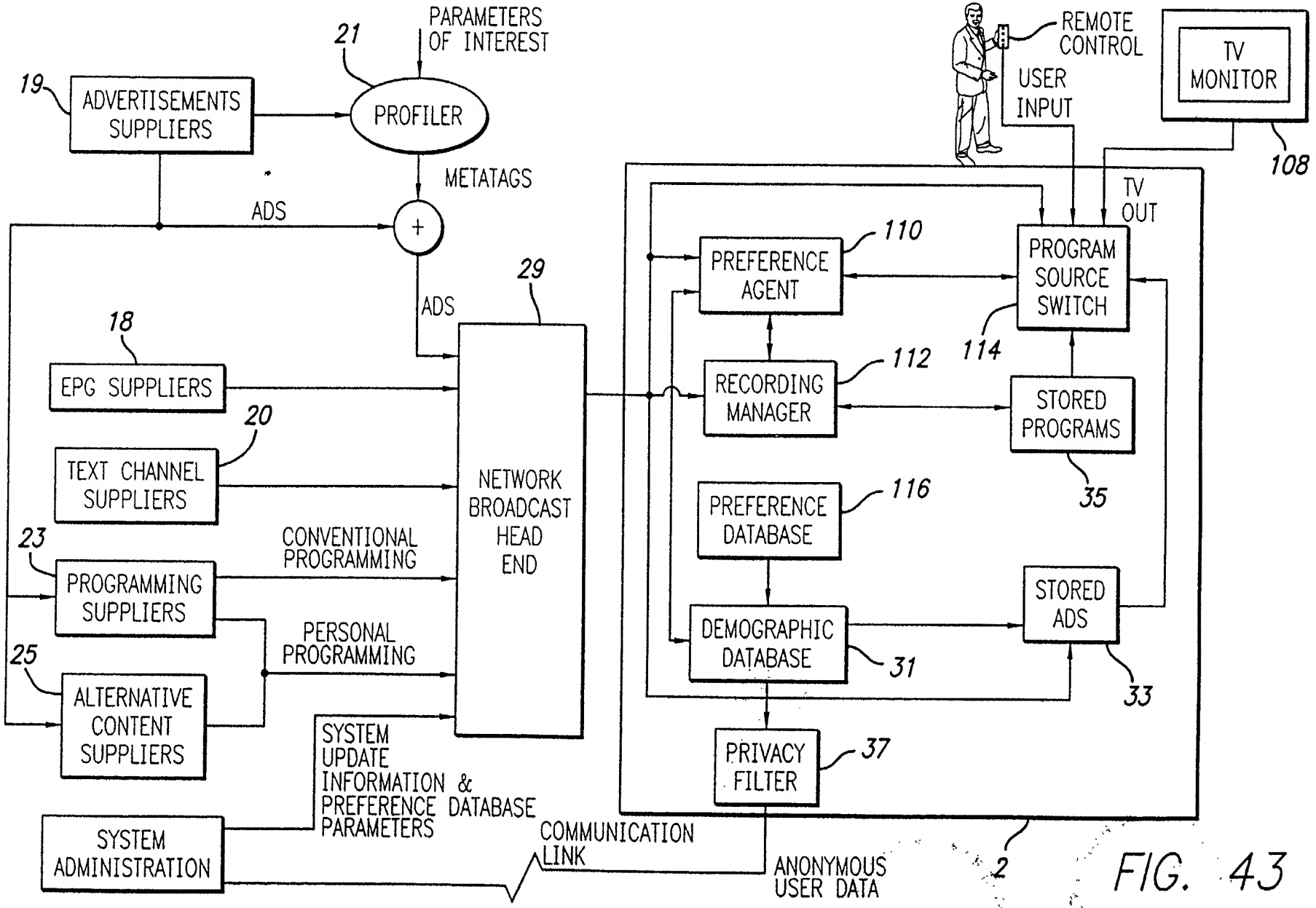


FIG. 43

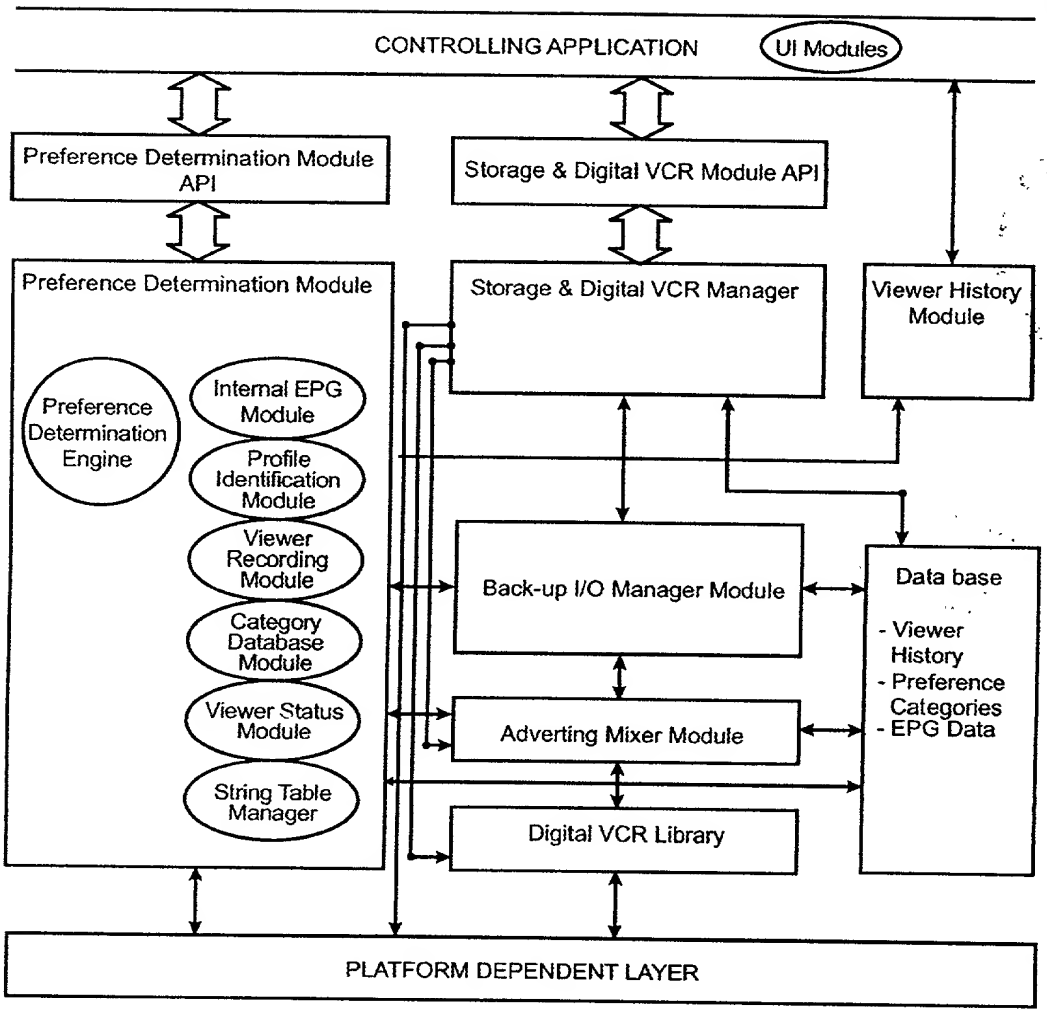

CONTROLLING APPLICATION
UI Modules
Preference Determination Module API
Storage & Digital VCR Module API
Preference Determination Module
Storage & Digital VCR Manager
Viewer History Module
Preference Determination Engine
Internal EPG Module
Profile Identification Module
Viewer Recording Module
Category Database Module
Viewer Status Module
String Table Manager
Back-up I/O Manager Module
Data base
- Viewer History
- Preference Categories
- EPG Data
Adverting Mixer Module
Digital VCR Library
PLATFORM DEPENDENT LAYER

FIG. 44

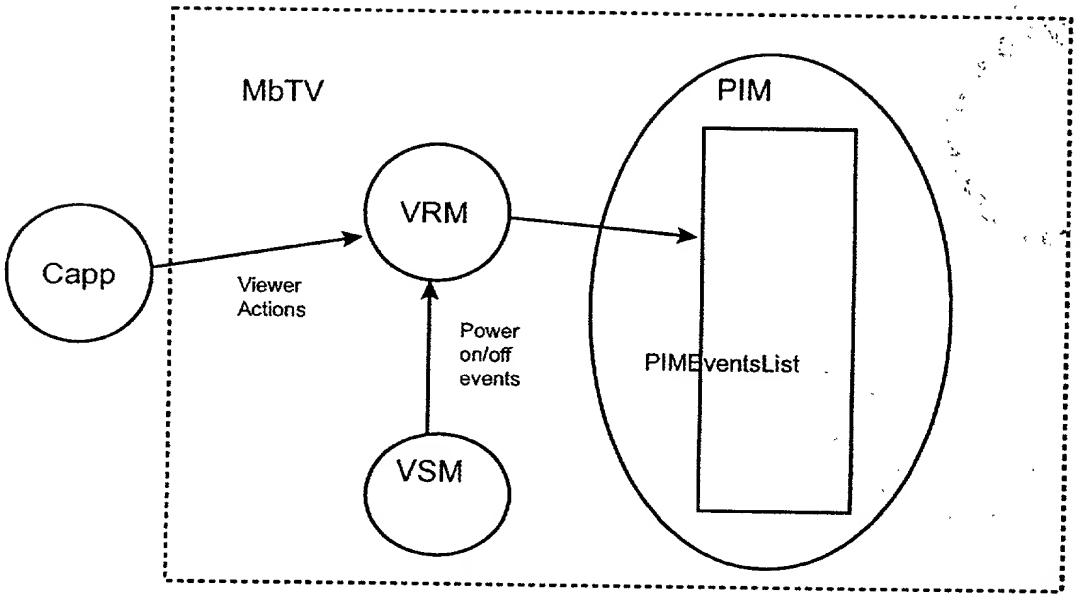

MbTV
PIM
VRM
Capp
Viewer
Actions
Power
on/off
events
PIMEventsList
VSM

FIG. 45

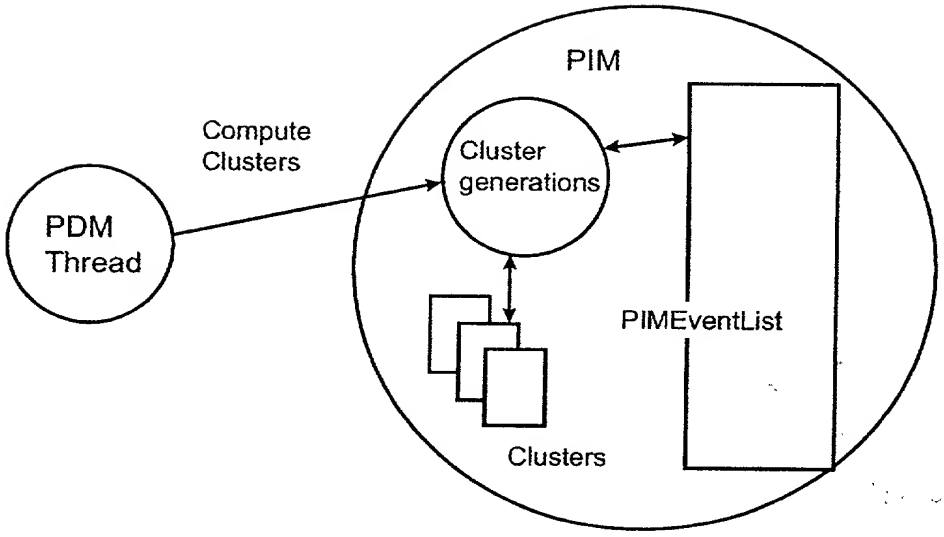

PIM
Compute
Clusters
Cluster
generations
PDM
Thread
PIMEventList
Clusters

FIG. 46

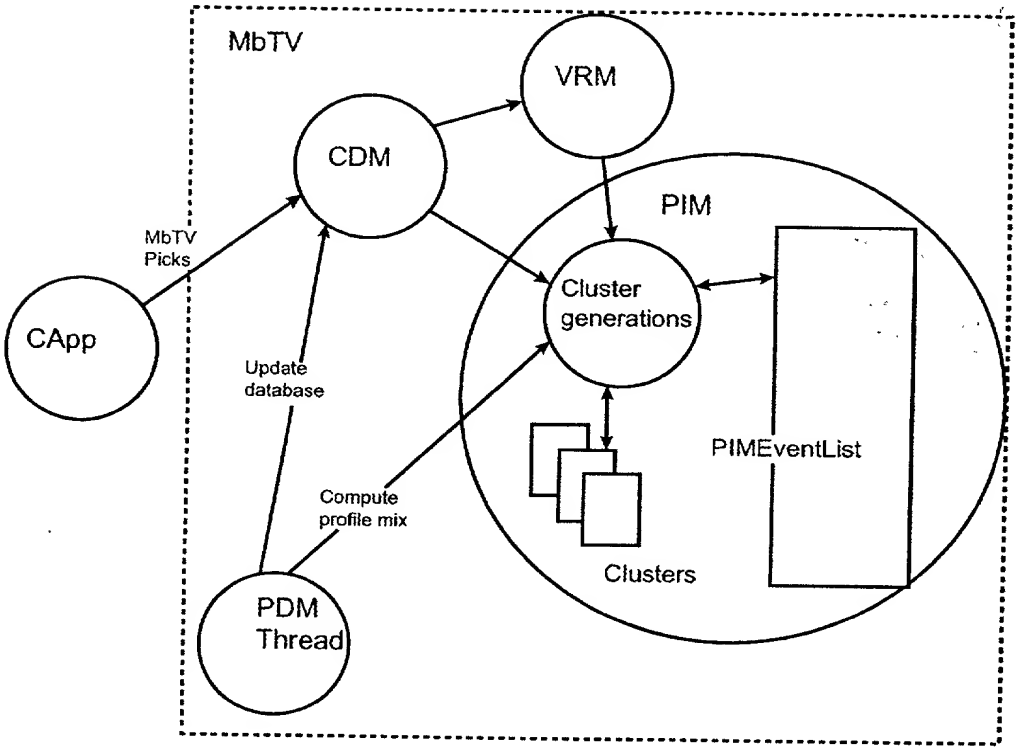

MbTV
VRM
CDM
PIM
MbTV
Picks
Cluster
generations
CApp
Update
database
PIMEventList
Compute
profile mix
Clusters
PDM
Thread

FIG. 47

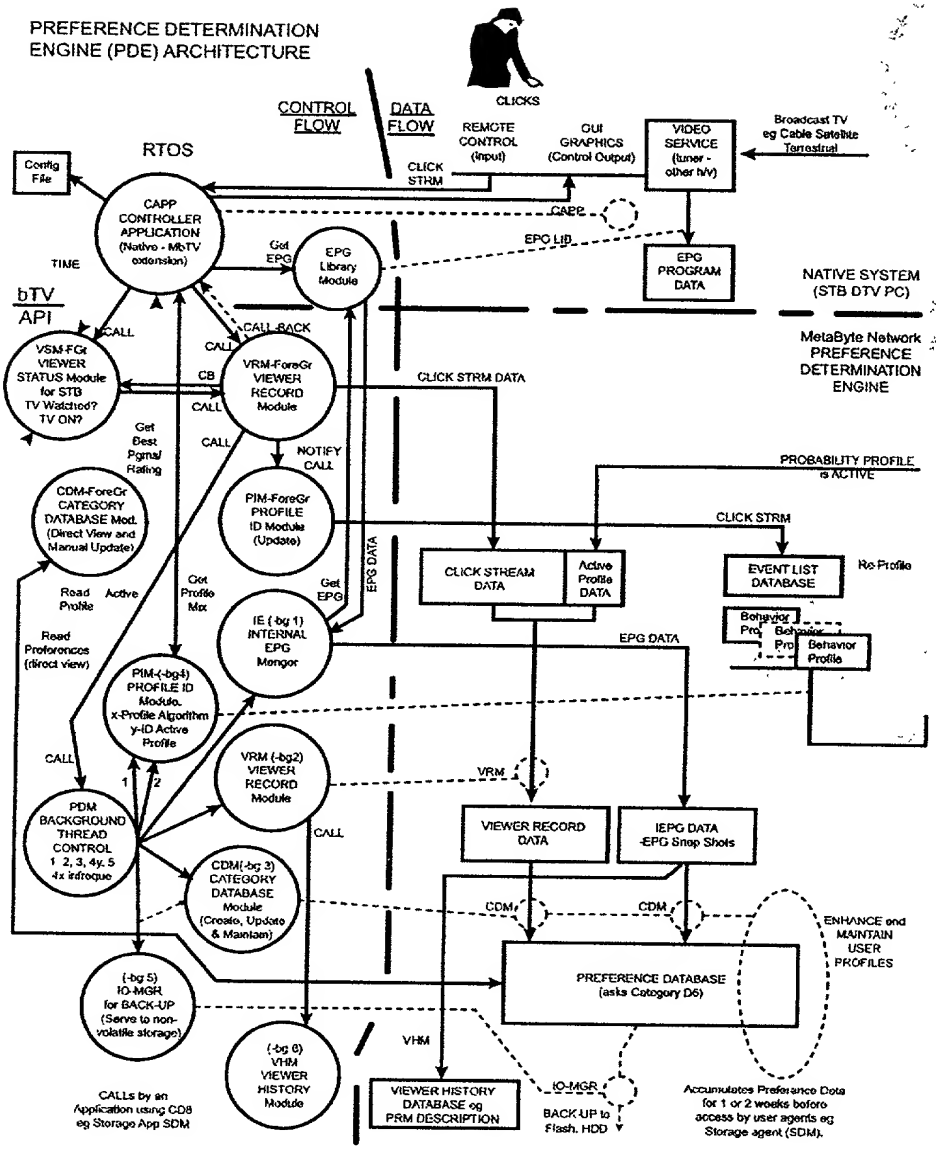

PREFERENCE DETERMINATION ENGINE (PDE) ARCHITECTURE
CONTROL FLOW
DATA FLOW
CLICKS
REMOTE CONTROL (Input)
GUI GRAPHICS (Control Output)
VIDEO SERVICE (tuner - other h/w)
Broadcast TV eg Cable Satellite Terrestrial
RTOS
Config File
CAPP CONTROLLER APPLICATION (Native - MbTV extension)
CLICK STRM
CAPP
EPG LIB
EPG PROGRAM DATA
NATIVE SYSTEM (STB DTV PC)
TIME
bTV API
Get EPG
EPG Library Module
CALL
CALL BACK
CB
VSM-FGr VIEWER STATUS Module for STB TV Watched? TV ON?
VRM-ForeGr VIEWER RECORD Module
CLICK STRM DATA
MetaByte Network PREFERENCE DETERMINATION ENGINE
Get Best Pgms/ Rating
NOTIFY CALL
PROBABILITY PROFILE is ACTIVE
CDM-ForeGr CATEGORY DATABASE Mod. (Direct View and Manual Update)
PIM-ForeGr PROFILE ID Module (Update)
CLICK STRM
EPG DATA
CLICK STREAM DATA
Active Profile DATA
EVENT LIST DATABASE
Re-Profile
Read Profile
Active
Got Profile Mix
Get EPG
IE (bg 1) INTERNAL EPG Mongor
Behavior Profile
Read Preferences (direct view)
EPG DATA
PIM-(-bg4) PROFILE ID Module. x-Profile Algorithm y-ID Active Profile
VRM (-bg2) VIEWER RECORD Module
VRM
PDM BACKGROUND THREAD CONTROL 1, 2, 3, 4y, 5 4x introque
VIEWER RECORD DATA
IEPG DATA -EPG Snap Shots
CDM(-bg 3) CATEGORY DATABASE Module (Create, Update & Maintain)
CDM
CDM
ENHANCE and MAINTAIN USER PROFILES
PREFERENCE DATABASE (asks Category DB)
(-bg 5) IO-MGR for BACK-UP (Serve to non-volatile storage)
VHM
(-bg 6) VHM VIEWER HISTORY Module
VIEWER HISTORY DATABASE eg PRM DESCRIPTION
IO-MGR
BACK-UP to Flash, HDD
Accumulates Preference Data for 1 or 2 weeks before access by user agents eg Storage agent (SDM).
CALLs by an Application using CDB eg Storage App SDM

FIG. 48

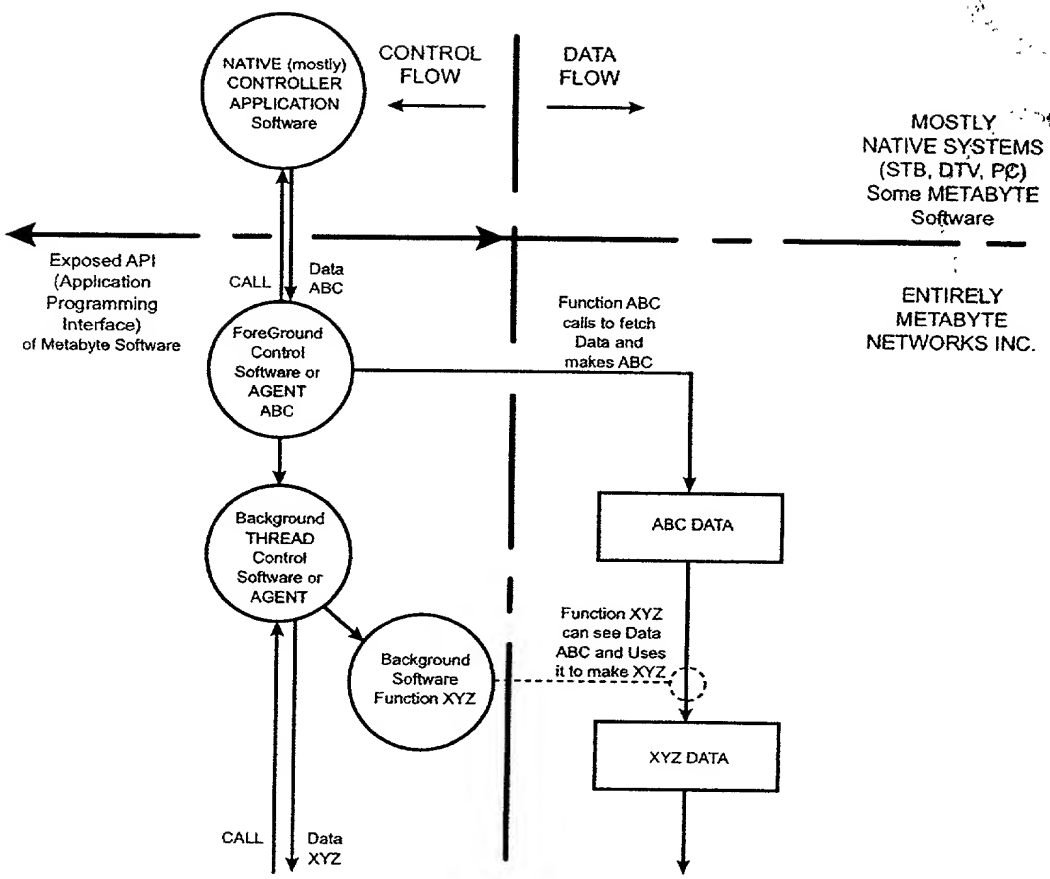

NATIVE (mostly) CONTROLLER APPLICATION Software
CONTROL FLOW
DATA FLOW
MOSTLY NATIVE SYSTEMS (STB, DTV, PC) Some METABYTE Software
Exposed API (Application Programming Interface) of Metabyte Software
CALL
Data ABC
ENTIRELY METABYTE NETWORKS INC.
ForeGround Control Software or AGENT ABC
Function ABC calls to fetch Data and makes ABC
Background THREAD Control Software or AGENT
ABC DATA
Background Software Function XYZ
Function XYZ can see Data ABC and Uses it to make XYZ
XYZ DATA
CALL
Data XYZ

FIG. 49

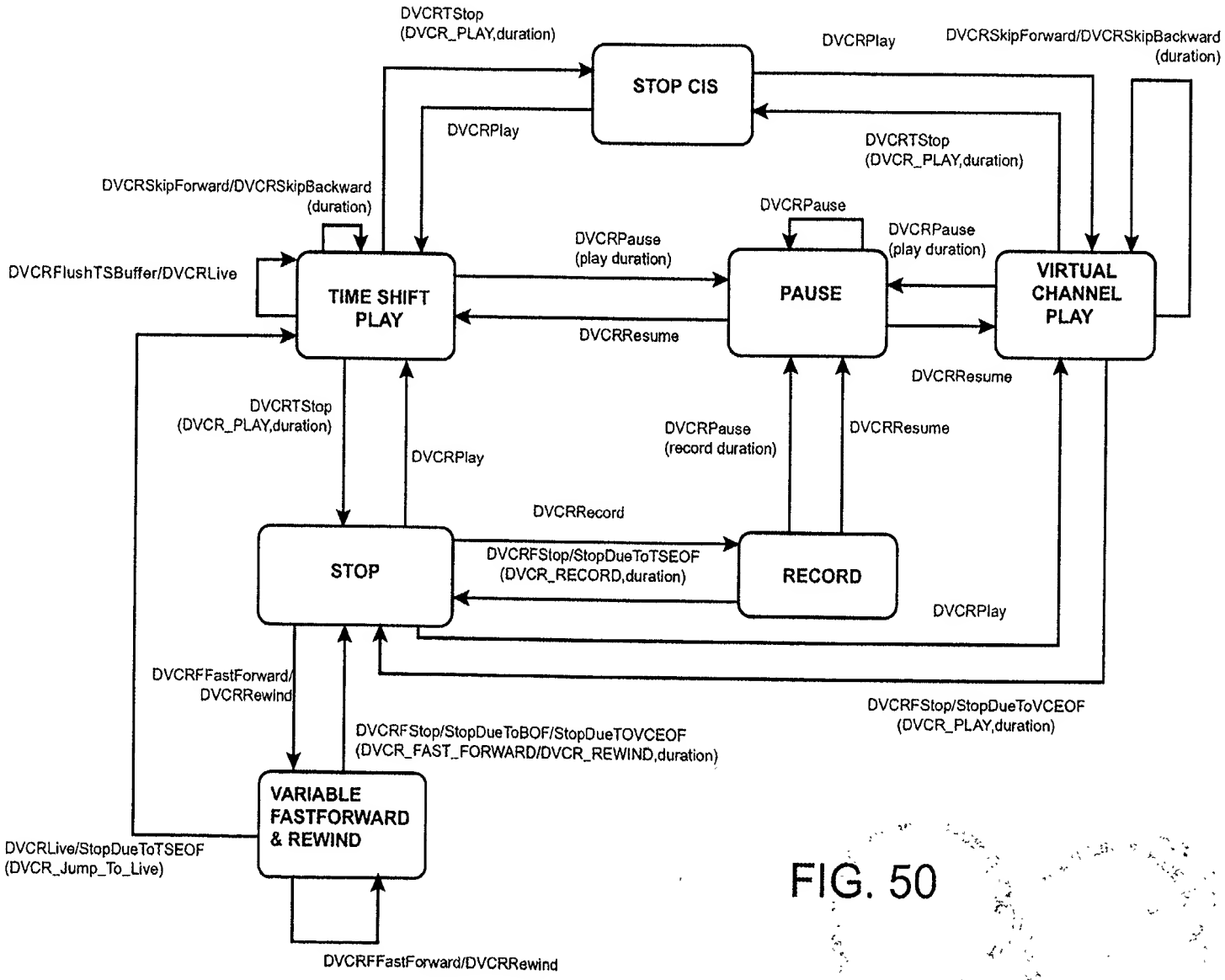

DVCRTStop
(DVCR_PLAY,duration)
DVCRPlay
DVCRSkipForward/DVCRSkipBackward
(duration)
STOP CIS
DVCRPlay
DVCRTStop
(DVCR_PLAY,duration)
DVCRSkipForward/DVCRSkipBackward
(duration)
DVCRPause
DVCRPause
(play duration)
DVCRPause
(play duration)
DVCRFlushTSBuffer/DVCRLive
TIME SHIFT
PLAY
PAUSE
VIRTUAL
CHANNEL
PLAY
DVCRResume
DVCRResume
DVCRTStop
(DVCR_PLAY,duration)
DVCRPlay
DVCRPause
(record duration)
DVCRResume
DVCRRecord
STOP
DVCRFStop/StopDueToTSEOF
(DVCR_RECORD,duration)
RECORD
DVCRPlay
DVCRFFastForward/
DVCRRewind
DVCRFStop/StopDueToVCEOF
(DVCR_PLAY,duration)
DVCRFStop/StopDueToBOF/StopDueTOVCEOF
(DVCR_FAST_FORWARD/DVCR_REWIND,duration)
VARIABLE
FASTFORWARD
& REWIND
DVCRLive/StopDueToTSEOF
(DVCR_Jump_To_Live)
DVCRFFastForward/DVCRRewind

FIG. 50

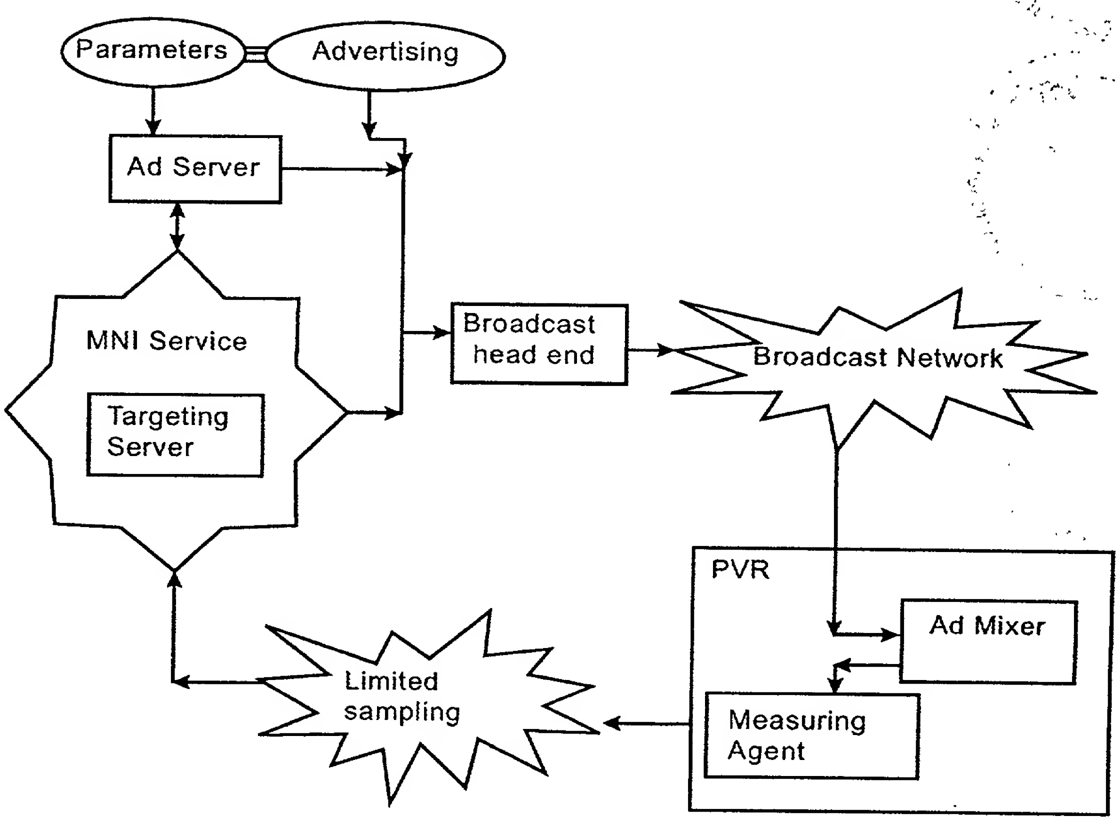

Parameters
Advertising
Ad Server
MNI Service
Targeting Server
Broadcast head end
Broadcast Network
PVR
Ad Mixer
Measuring Agent
Limited sampling

FIG. 51

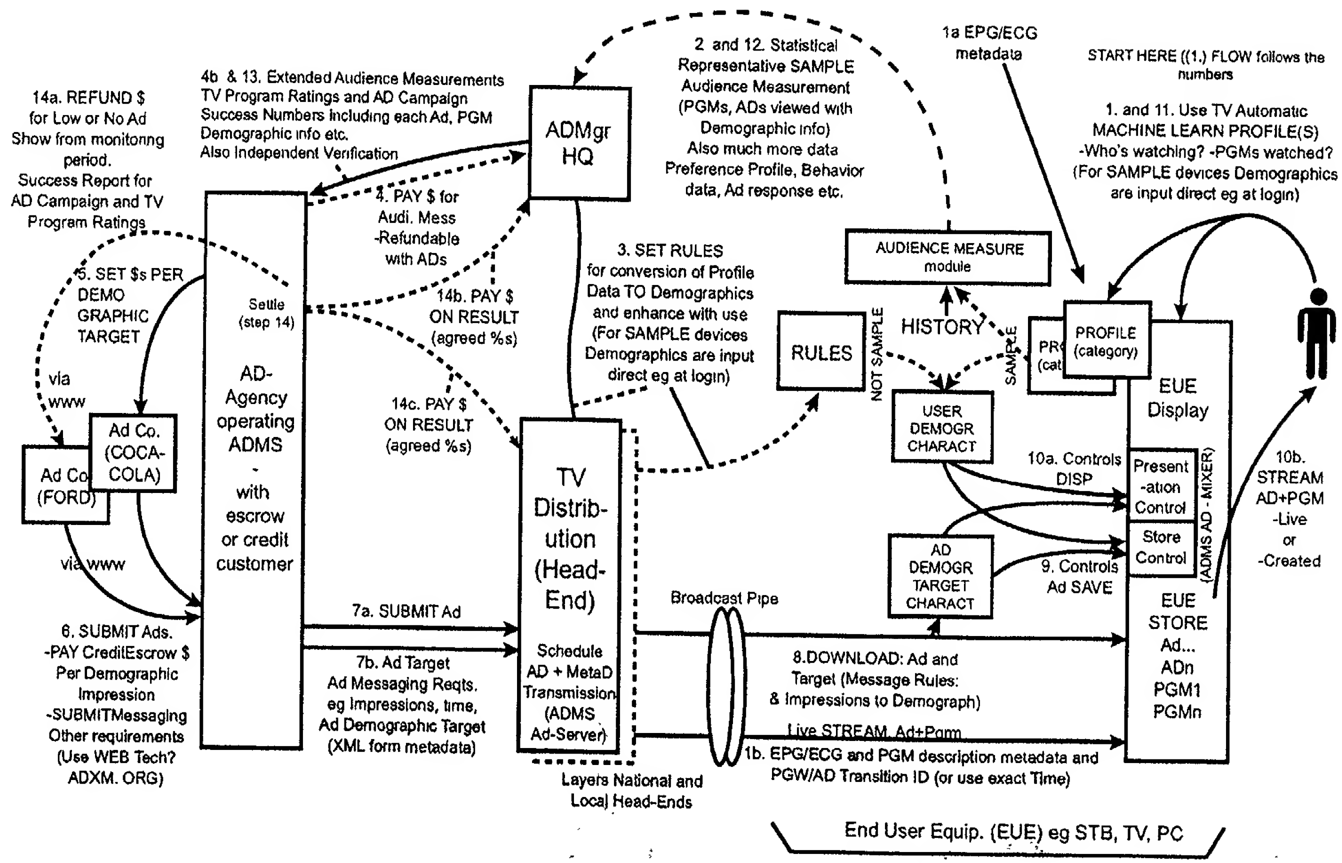

14a. REFUND $ for Low or No Ad Show from monitoring period. Success Report for AD Campaign and TV Program Ratings
4b & 13. Extended Audience Measurements TV Program Ratings and AD Campaign Success Numbers including each Ad, PGM Demographic info etc. Also Independent Verification
ADMgr HQ
2 and 12. Statistical Representative SAMPLE Audience Measurement (PGMs, ADs viewed with Demographic info) Also much more data Preference Profile, Behavior data, Ad response etc.
1a EPG/ECG metadata
START HERE ((1.) FLOW follows the numbers
1. and 11. Use TV Automatic MACHINE LEARN PROFILE(S) -Who's watching? -PGMs watched? (For SAMPLE devices Demographics are input direct eg at login)
4. PAY $ for Audi. Mess -Refundable with ADs
5. SET $s PER DEMO GRAPHIC TARGET
Settle (step 14)
AD-Agency operating ADMS - with escrow or credit customer
3. SET RULES for conversion of Profile Data TO Demographics and enhance with use (For SAMPLE devices Demographics are input direct eg at login)
AUDIENCE MEASURE module
HISTORY
RULES
NOT SAMPLE
SAMPLE
PROFILE (category)
EUE Display
14b. PAY $ ON RESULT (agreed %s)
via www
Ad Co. (COCA-COLA)
Ad Co (FORD)
14c. PAY $ ON RESULT (agreed %s)
USER DEMOGR CHARACT
10a. Controls DISP
Present -ation Control
(ADMS AD - MIXER)
10b. STREAM AD+PGM -Live or -Created
TV Distrib-ution (Head-End)
Store Control
AD DEMOGR TARGET CHARACT
9. Controls Ad SAVE
via www
7a. SUBMIT Ad
Broadcast Pipe
EUE STORE Ad... ADn PGM1 PGMn
6. SUBMIT Ads. -PAY CreditEscrow $ Per Demographic Impression -SUBMITMessaging Other requirements (Use WEB Tech? ADXM. ORG)
7b. Ad Target Ad Messaging Reqts. eg Impressions, time, Ad Demographic Target (XML form metadata)
Schedule AD + MetaD Transmission (ADMS Ad-Server)
8.DOWNLOAD: Ad and Target (Message Rules: & Impressions to Demograph)
Live STREAM Ad+Pgm
1b. EPG/ECG and PGM description metadata and PGW/AD Transition ID (or use exact Time)
Layers National and Local Head-Ends
End User Equip. (EUE) eg STB, TV, PC

FIG. 52

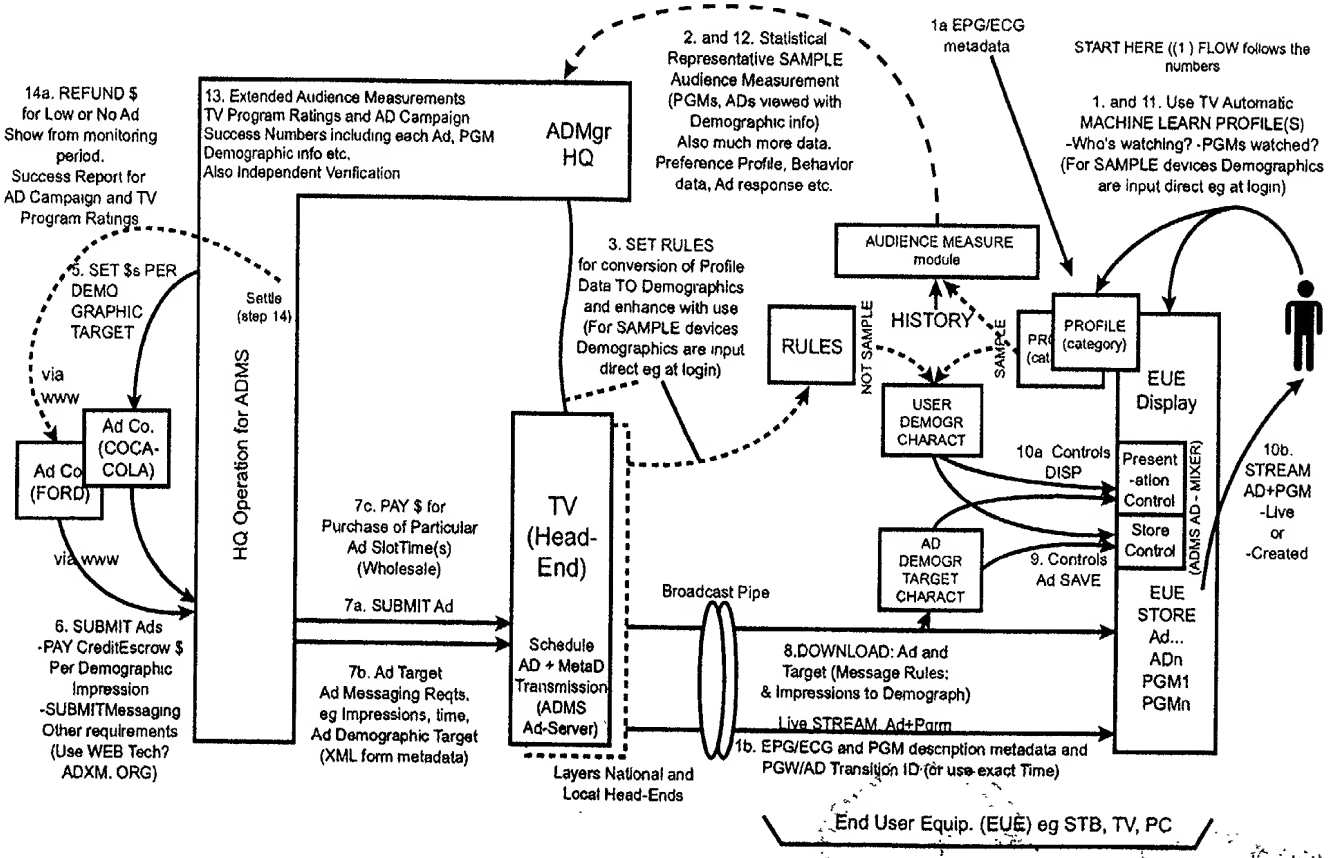

14a. REFUND $ for Low or No Ad Show from monitoring period. Success Report for AD Campaign and TV Program Ratings
13. Extended Audience Measurements TV Program Ratings and AD Campaign Success Numbers including each Ad, PGM Demographic info etc. Also Independent Verification
ADMgr HQ
2. and 12. Statistical Representative SAMPLE Audience Measurement (PGMs, ADs viewed with Demographic info) Also much more data. Preference Profile, Behavior data, Ad response etc.
1a EPG/ECG metadata
START HERE ((1) FLOW follows the numbers
1. and 11. Use TV Automatic MACHINE LEARN PROFILE(S) -Who's watching? -PGMs watched? (For SAMPLE devices Demographics are input direct eg at login)
5. SET $s PER DEMO GRAPHIC TARGET
via www
Ad Co. (COCA-COLA)
Ad Co (FORD)
via www
6. SUBMIT Ads -PAY CreditEscrow $ Per Demographic Impression -SUBMITMessaging Other requirements (Use WEB Tech? ADXM. ORG)
Settle (step 14)
HQ Operation for ADMS
3. SET RULES for conversion of Profile Data TO Demographics and enhance with use (For SAMPLE devices Demographics are input direct eg at login)
AUDIENCE MEASURE module
RULES
NOT SAMPLE
HISTORY
SAMPLE
PROFILE (category)
USER DEMOGR CHARACT
EUE Display
10a Controls DISP
Present -ation Control
Store Control
(ADMS AD - MIXER)
10b. STREAM AD+PGM -Live or -Created
AD DEMOGR TARGET CHARACT
9. Controls Ad SAVE
EUE STORE Ad... ADn PGM1 PGMn
7c. PAY $ for Purchase of Particular Ad SlotTime(s) (Wholesale)
7a. SUBMIT Ad
7b. Ad Target Ad Messaging Reqts. eg Impressions, time, Ad Demographic Target (XML form metadata)
TV (Head-End)
Schedule AD + MetaD Transmission (ADMS Ad-Server)
Broadcast Pipe
8.DOWNLOAD: Ad and Target (Message Rules: & Impressions to Demograph)
Live STREAM Ad+Pgm
1b. EPG/ECG and PGM description metadata and PGW/AD Transition ID (or use exact Time)
Layers National and Local Head-Ends
End User Equip. (EUE) eg STB, TV, PC

FIG. 53